University of Alberta

Youth Suicide

by

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Abstract

This thesis provides an overview and an analysis of the current research on youth suicide by focusing on four basic themes: (1) parasuicide and suicidal ideation; (2) methods of suicide; (3)biological, psychological, and social/environmental risk factors associated with youth suicide; and (4) suicide prevention, intervention, and postvention. Canadian youth suicide has risen rapidly in the past four decades and it presently is among the highest in the industrialized world. Suicide is currently the third leading cause of death among Canadian adolescents. More males complete suicide yet more females attempt it. Youth suicide is found to be the result of a complex interaction of biological, psychological, and social/environmental risk factors which are addressed in this thesis in light of suicide prevention, intervention, and postvention programs.

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CHAPTER I

Introduction

No man is an island, entire of itself; every man is a piece of a continent, a part of the main. If a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friend's or of thine own were. Any man's death diminishes me because I am involved in mankind, and therefore never send to know for whom the bell tolls; it tolls for thee.

John Donne

Statement of the Problem

Youth suicide is a significant social and human problem in Canada. In the past three decades the rate of suicide among 15- to 19-year-old Canadians has quadrupled. Canada has the third highest rate of suicide in the industrialized world for young people between the ages of fifteen and twenty-four, about 16 suicides per 100,000 people (O'Neill, 1993). Statistics Canada (1997) reported that 646 Canadians between the ages of 10 and 24 committed suicide in 1995, and educated estimates are that 50 to 100 times this number attempted suicide. One researcher estimated that about one million youth undergo suicidal crises each year in North America (Shagle & Barber, 1995). All of these data lead to the inescapable conclusion that youth suicide is a problem we must take seriously.

Why do so many young people want to end their lives? Although we generally regard youth as a time of opportunity, growth, and good times, research indicates that young people are struggling. One survey of more than 90,000 school children concluded that high stress levels and mounting anxiety are significant problems for today's youth (Romano, 1992). In the years between childhood and adulthood adolescents are required to adjust to biological, cognitive, social, and environmental changes the sum total of which

can take an exasperating toll on their health and welfare. In their beleaguered and worn out condition many young people come to view suicide as a solution to the life stress they are experiencing.

Youth suicide is a social and a personal tragedy the effects of which reverberate throughout the immediate family, friends, and the broader social community. School communities, in particular, struggle with the impact of youth suicide.

The purpose of this thesis is to provide an overview and analysis of the current research on youth suicide. The magnitude of this problem has resulted in a large body of research with a focus on prevalence and methods, as well as on biological, cognitive, and environmental risk factors. Likewise, the areas of suicide prevention, intervention, and postvention have received considerable attention in recent years. This particular work is a distillation and a synthesis of a wide range of contemporary research designed to provide professionals with clinically useful data.

Definition of Terms

The study of suicide necessitates a definition of terms. While differences in terminology exist, to clarify how "suicide", "parasuicide" (suicidal behavior), and "suicidal ideation" are used in this thesis, I provide the following definitions:

Suicide: an intentional act of self injury resulting in death (Mortensen, 1990).

Parasuicide (Suicidal Behavior): non-fatal deliberate self-harm. This definition encompasses failed suicides, as well as episodes in which actual self-destruction is clearly not intended (Morgan, as cited in Mortensen, 1990).

Suicidal Ideation: thoughts or verbalizations of causing serious injury or death to oneself (Pfeffer, 1986).

Problems Associated with the Investigation of Youth Suicide

Before presenting an overview of the literature regarding youth suicide it is helpful to address some of the methodological problems encountered in researching this topic. Most of the problems concern the following four areas: (a) biased data, (b) lack of data, (c)

lack of control groups, and (d) nonrepresentative samples. Let me briefly survey these difficulties.

First, it is difficult to determine with confidence the accuracy of the data on suicide, parasuicide, and suicidal ideation. Researchers collecting mortality data rely on family members and friends of the deceased as a primary data source but frequently this information is protected or clouded. Because these evaluations are often conducted immediately following a suicide they almost always are draped in heavy emotion. Most of the studies regarding suicide attempts and suicidal ideation are based on self-report questionnaires, however, self-reports are accurate only to the degree that the self-perceptions are accurate and to the degree that the person expresses them honestly. For instance, many of the studies regarding the family system rely on the suicidal youths' perceptions of family functioning. Since suicidal ideators often hold rejecting attitudes about self their interpretations of family life could be biased and, hence, they may report higher negative family interactions and lower parental acceptance. The accuracy of suicide data could be improved if it were gathered from multiple sources.

Second, solid data regarding parasuicides is lacking. Canadian provinces do not gather systematic data on suicide attempts and many non-lethal suicide attempts are not identified for what they are. Furthermore, parasuicidal studies often do not differentiate serious attempts from mere gestures.

Third, most of the studies reported in the scientific literature lack adequate control groups; some lack any control groups.

Fourth, samples may not be representative. Most of the studies involving suicide attempters employed clinical populations. However, correlates identified in clinical populations may not be applicable to the nonclinical population. The generalizability of data from clinical samples to the general population is questionable.

Overview of the Text

Chapter 2 consists of a review of the statistical data pertaining to youth suicide, parasuicide, and suicidal ideation. To determine the prevalence of these problems we undertook to examine statistics from countries around the world, from Canada, and from Alberta. Methods of suicide are reviewed and the differences among youth suicide, parasuicide, and suicidal ideation are investigated.

To provide some insight into the underlying causes of youth suicide Chapter 3 reviews the biological, psychological, and social/environmental risk factors associated with youth suicide. Some of the more common precipitants of suicide are also examined. While most youth suicides are preceded by a specific crisis, in the vast majority of instances the underlying causes for suicide are a complex interaction of biological, psychological, and environmental factors pressuring the young person.

Chapter 4 reviews suicide prevention, intervention, and postvention and provides strategies for reducing and preventing suicide. Since most youth in Canada attend school this chapter focuses on school-based programs whose mandate is to reduce the number of student suicides.

The final chapter in this thesis underscores the significance of knowledge in combating youth suicide. With a foundational understanding of the variables associated with youth suicide the reader is better able to grasp the extent of the problem in Canada, and better equipped to recognize subgroups of the population at higher risk of suicide. Knowledge of these critical factors may suggest effective strategies for the prevention, intervention, and postvention of suicide.

CHAPTER II

Youth Suicide: Prevalence And Methods

The intent of this chapter is to examine the statistical data pertaining to suicide to gain a better understanding of the prevalence of the problem internationally, in Canada, and in Alberta. This chapter has several ambitions; first methods of suicide will be investigated; second statistics on parasuicide and suicidal ideation are examined; third a discussion of the problems encountered in the statistical analysis of youth suicide will be undertaken. The chapter ends with three profiles of suicidal adolescents to add a human side to the statistics.

International Trends and Comparisons

A recent series of studies have examined the differences in youth suicide rates nationally and internationally (Allen, 1994; Health and Welfare Canada, 1994; Grosz, Zimmerman & Asnis, 1995; Leenaars & Lester, 1995b; Lester, 1991; The United Nations Children's Fund, 1994; Zimmerman, 1995b). To help us gain a better understanding of youth suicide in Canada and Alberta, we will begin by looking at teenage suicide from a cross-cultural perspective.

Lester (1991), in his examination of suicide rates for 1970 and 1980, for young people aged 5-14 and 15-24, found great variation among the nations of the world in youth suicide rates. Rising youth suicide rates were not found in every nation. Rather, some nations experienced a decrease, while others witnessed a rise in the youth suicide rates for only one sex. The nations with the highest increases in youth suicide were Norway (+224%), Spain (+93%), Switzerland (+80%), and Thailand (+78%). New Zealand, Israel, Finland, Canada, and the Netherlands experienced lesser increases. The nations with the largest decreases in the youth suicide rates during this same period were Chile (-32%), Venezuela (-28%), and Sweden (-13%). West Germany and Japan also experienced decreases during this time.

Furthermore, when Lester (1991) compared the increase in youth suicide rates with those of the total population, he found that the following nations had a rising youth suicide

rate in both males and females: Finland, the Netherlands, New Zealand, Norway, Scotland, Spain, and Switzerland. Nations with a rising youth suicide rate in males only were: Australia, Canada, France, Greece, Israel, Italy, Thailand, and the United States. And nations with a rising youth suicide rate in females only were: Austria, Bulgaria, England and Wales, and Singapore. Based upon this data Lester concluded that no universal pattern exists, and that different nations experienced different changes in male and female youth suicides, as compared to the suicide rate of the total population. Lester's (1991) search for variables that correlate with suicide rates in nations (such as the quality of life) found that none were significantly related to youth suicide rates in *all* cultures.

The United Nations Children's Fund (1994) published suicide rates for 15-19 year-olds in various industrialized countries for 1970 and 1991. These data are presented in Table 1. Similar to Lester's (1991) findings, they indicate that youth suicide rates varied in the nations of the world. They also support Lester's findings that all nations had not experienced rising youth suicide rates. The rates have actually decreased in some nations. The nations with the highest increases in youth suicide, in descending order, were Norway, New Zealand, Ireland, Canada, United States, and Australia. Of these countries, Norway showed by far the largest increase over the period (+12.1), however, the increase may be misleading because the actual number of suicides (41) is small in comparison to suicides in more populous countries. The same is true of Ireland which has also seen a large rise in teen suicide rate--again from a low and perhaps underreported base in 1970. In contrast, the nations with the largest decreases in the youth suicide rates during this same period were (in descending order) Czechoslovakia, Hungary, Japan, Austria, Switzerland, and Sweden. The rate in Czechoslovakia (now the Czech Republic and Slovakia) fell by an astonishing 60%, while Hungary's rate has almost halved. However, of the major industrial powers, Japan is the only country to record a substantial fall (The United Nations Children's Fund, 1994).

Lester's (1991) cross-cultural comparison examined rates for young people aged 15 to 24, while the data from The United Nations Children's Fund (1994) only included rates for young people aged 15 to 19, therefore, a complete comparison of the two groups was not possible. In addition, the two studies did not include all the same countries in their studies. However, both studies seemed to suggest that youth suicide is an international concern, even though some countries record rates that are comparatively small (e.g., Greece has a rate of 1.3). Both studies indicated that some nations have rising rates while others have decreased or stabilized rates.

Although some countries have managed to drastically reduce youth suicide, in Canada the rates are rising. Table 1 indicates that Canada's 1991 rate of 13.5 per 100,000 is almost double its 1970 rate of 7.0 per 100,000 (The United Nations Children's Fund, 1994). When compared with other nations of the world, Canadian teenagers have the third highest suicide rate of the industrialized world, ranking behind New Zealand and Finland. Therefore, concern about teenage suicide is clearly warranted.

Table 1

International Comparison of Suicide Rates (per 100,000) of Young People aged 15-19, and Annual Number

	Rate per 100,000		No.
	1970	1991	1991
Current rate higher than 10			
New Zealand	5.8	15.7	45
Finland	10.6	15.0	46
Canada	7.0	13.5	253
Norway	1.3	13.4	41
United States	5.9	11.1	1979
Australia	5.5	10.5	143
Austria	13.4	10.2	52
Current rate 5 to 10			
Hungary	15.0	8.4	70
Czechoslovakia*	18.3	7.7	102
Ireland	0.4	7.5	26
Bulgaria	5.9	7.2	48
Poland	7.0	7.1	210
Switzerland	8.6	6.7	28
Sweden	7.6	6.2	35
France	5.5	5.3	217
* Former			
Current rate less than 5			
Denmark	2.4	4.4	16
United Kingdom	2.3	4.3	159
Japan	7.8	3.8	371
Portugal	4.1	3.7	31
Netherlands	2.4	3.1	32
Spain	1.1	3.1	102
Italy	2.4	2.5	109
Greece	1.4	1.3	9

Note. From The United Nations Children's Fund. (1994). The Progress of Nations. p. 43. Author.

Canada and the United States

As Leenaars and Lester (1995b) pointed out, Canada and the United States are obvious units of comparison because of their proximity, similar language, and shared cultural backgrounds. Therefore, we will continue our examination of international trends in youth suicide by focusing on our American neighbors. In the United States, suicide is currently the third leading cause of death among youths 15 to 24. The suicide rate for this age group increased threefold from the 1950s to the 1980s. Although the rate has stabilized in recent years, nearly 5,000 adolescents kill themselves annually. And the rate may be higher because some suicides are officially reported as "accidents" or attributed to other causes (Allen, 1994; Grosz et al., 1995; Zimmerman, 1995b).

Even though the recorded number of suicides for young people is much higher for the United States than for Canada (i.e., see Table 1; completed suicide for youths aged 15-19 in 1991 was 253 for Canada, and 1979 for the United States), Canada's youth suicide rate outranks that of the United States. Whereas Canada ranks third in reported teen suicides in the industrialized world (13.5), the United States ranks fifth (11.1) (The United Nations Children's Fund, 1994). Similarly, Canada's rate for youth aged 15-24, is also higher (26.9) than that of the United States (21.9). Canadian youth, especially males, are at higher risk for suicide than their counterparts in the United States. The most current data indicates that for boys 15-19 the suicide rate is 50 to 60% greater in Canada than in the United States (Lester, 1991; Leenaars & Lester, 1995b).

Research investigating *why* the suicide rate among Canada's youth is higher than that of the United States is lacking. However, it has been theorized that attitudes toward suicide are different in these countries. Several scholars (Leenaars & Lester, 1995b; Lester, 1991) have advanced the hypothesis that Canadians see suicide as related to mental illness and as a cry for help, and more strongly endorse the individual's right to die. On the other hand, according to this hypothesis, Americans see suicide as a moral evil. Further theories

propose that Canadian youth are more likely to see suicide as a solution to their problems than their American counterparts.

Leenaars and Lester (1995b) analyzed and compared rates of birth, divorce, marriage, and unemployment to rates of suicide from 1965-1985 in Canada and the United States. They found that in Canada measures of domestic integration (divorce and birth rates) and the economy (unemployment rate) predicted youth suicide rates more successfully than adult suicide rates. On the other hand, in the United States for the same period there was less variation in the predictors of suicide by age. These findings suggest that Canadian youth are more negatively affected, in terms of suicide, by unemployment, divorce, and birth rates, than their counterparts in the United States. As the authors pointed out, these data support Durkheim's theory that the level of social integration affects the suicide rate since divorce weakens social integration while the presence of children strengthens it (at least in theory).

Although Leenaars and Lester (1995b) conducted a thorough study of youth suicide in Canada and the United States they did not provide specific explanations as to its causes. As they themselves noted, caution about overgeneralizing is necessary, and while it seems that Canada's youth suicide rates are higher than those of the United States, their conclusion that Canadian "youth perceive suicide as a part of everyday life" is premature. More research is needed to verify this hypothesis. Certainly, this researcher's personal experience does not confirm this hypothesis. Rather, most of the young people I have talked to are disturbed by suicide and do not regard it as an acceptable solution to life problems.

Although the cross-national comparisons provided us with some indication of how Canadian youth suicide rates compare with those of other countries, they lend themselves to misinterpretation. The following are some reasons why comparisons between countries must be made with caution. First, the definition of suicide varies from country to country, and different nations employ different methods of death certification. For instance, in most

countries suicide rates are quite low for children aged 5-14, which is possibly a result of these suicides being misclassified. Therefore, zero rates for this age group in England, Wales, and Scotland are likely a result of the decision not to certify the deaths as suicide. On the other hand, some countries do classify self-inflicted deaths by children in this age category as suicides. Second, the methods and timeliness of data collection vary from country to country, making it difficult to develop detailed comparisons of several countries in terms of age-standardized rates and trends for similar population groups in the same years (Health and Welfare Canada, 1994). Third, sometimes the data are incomplete. For example, some researchers provide the rates of youth suicide without including raw numbers. Therefore it is difficult to ascertain how significant percentage increases or decreases truly are. Finally, it may be misleading to compare suicide rates for different years, as Lester's (1991) study and The United Nations Children's Fund (1994) publication did, because data collection, reporting, and verification of suicides have differed significantly in the different time periods being compared. It is possible that some countries have higher rates of youth suicide because they are more diligent in properly recording these deaths.

Youth Suicide in Canada

In spite of difficulties in cross-national comparisons it is apparent that suicide rates among Canadian youth are among the highest in the industrialized world. In the past three decades, the rate of suicide among 15- to 19-year-old Canadians has quadrupled, from 3.24 per 100,000 in 1962 to 12.89 per 100,000 in 1992 (Statistics Canada, 1994). After comparing Canada's rates of suicide by age for 1970, 1980, and 1988, Lester (1993) concluded that Canada experienced the greatest increases in its suicidal rate from 1970 to 1980 (see Table 2). He also noted that the total suicide rate increased by 23.9% while the suicidal rate for youths aged 15-24 increased by 50%. Moreover, this increase primarily affected young males. Various researchers have noted that while the rate for those over 30 has remained stable, the number of young people committing suicide has grown, especially

among males in their late teens and early twenties (Lester, 1993; Health and Welfare Canada, 1994; Rittner, Smyth & Wodarski, 1995; Stokes, 1994).

Table 2

Canadian Rates of Suicide by Age in 1970, 1980, and 1988: per 100,000

Year	Sex	15-24	25-34	35-44	45-54	55-64	65-74	75+ (Ages)
1970	male	15.6	20.1	26.6	27.9	31.9	28.0	24.6
1980	male	24.8	29.5	25.1	30.7	28.5	26.9	38.1
1988	male	26.9	29.2	26.1	24.2	28.0	26.2	30.6
1970	female	4.8	8.6	10.6	14.5	11.4	9.5	4.6
1980	female	5.4	8.1	8.8	13.7	12.1	9.5	5.9
1988	female	4.9	7.1	9.8	9.9	6.9	6.1	6.2

Note. From Lester, D. L. (1993). The Cruelest Death: The Enigma of Adolescent Suicide, p. 26. The Charles Press.

Further evidence that youth suicide rates in Canada have risen steadily over the past four decades is presented in Table A1 in the appendix. According to Statistics Canada (1994), the suicide rate in 1993 was 12.19 per 100,000 for youths aged 15 to 19--a marked increase over the rate of 3.34 in 1950 and 7.02 in 1970. Moreover, the suicide rate for youths aged 20 to 24 increased at an even faster rate from 5.86 per 100,000 in 1950 to 14.05 in 1970 and 16.47 in 1993. Although rates have leveled off in recent years, the numbers are up more than 600 per cent since the 1950s (Turner, 1996).

The figures in Table A1 indicate that suicide in children aged 5 to 9 is practically non-existent, while for youths aged 10 to 14 the rates are relatively low and rising at a much slower rate than for the older youth. The actual numbers of deaths (rates per 100,000 are in parentheses) in the 10 to 14-year age group varied from three deaths in 1950 (0.27) to 44 deaths (2.24) in 1993. Whereas, for the same years, the death toll in the 15 to 19-year group was 36 (3.34) and 237 (12.19) respectively (Statistics Canada, 1994). However, the Canadian Institute of Child Health (1994) reported that the rate of suicide for this age group

has almost doubled over the last 30 years. As noted earlier, when referring to international suicide statistics it is likely that suicide rates for children aged 5 to 14 are unfairly low because of misclassification. On the other hand, some of the dramatic increase for youths aged 15 to 24 can be attributed to more accurate records and the increasing willingness of coroners to label a self-inflicted death as a suicide.

The latest figures provided by Statistics Canada (1997) (see Table 3) indicate that 3,158 males and 812 females committed suicide in Canada in 1995--almost four times as many males as females. Quebec recorded the largest number of deaths by suicide, followed by Ontario and Alberta. However, when comparing mean suicide rates (per 100,000) for the different regions in Canada, the relative ranking order changes.

Table 3

Deaths from Suicide and Self-inflicted Injury in Canada in 1995, by Sex and Province

	Province of Residence												
Sex	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alt.	B.C.	Yukon	N.W.T.
M	3,158	37	15	96	108	1,134	827	103	105	374	342	6	11
F	812	5	4	26	13	297	260	15	23	77	84	3	5

Note. From Statistics Canada (1997). Catalogue 84-208-XPB, pp. 128-129.

As presented in Table 4, the suicide rate for Northwest Territories (23.3) significantly exceeded the rates for all the other regions. After the Northwest Territories, Alberta (18.3) and Quebec (17.4) ranked second and third. Yet in actual numbers, there were only 16 suicides in the Northwest Territories as compared with 473 in Alberta and 1,255 in Quebec, which puts the per capita death in the Northwest Territories in greater perspective. Newfoundland (8.5), the Yukon (9.0) and Ontario (9.3) have the lowest rates

with suicides numbering 50, 3 cases, and 987 respectively (Health and Welfare Canada, 1994).

Table 4

Suicide Death Rates for Both Sexes in Canada and the Provinces, 1992

(Standard Population: Canada 1991)

	Province of Residence												
Year	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alt.	B.C.	Yukon	N.W.T.
1992	13.0	8.5	13.0	10.7	11.3	17.4	9.3	12.2	14.7	18.3	13.1	9.0	23.3

Note. From Health and Welfare Canada. (1994). Suicide in Canada: Update of the Report of the Task Force on Suicide in Canada. p. 204.

The actual number of suicides for each region should also be considered when drawing comparisons. Although comparisons among the provinces are revealing, they may not be completely accurate because the provinces and territories do not use the same definition of suicide, or employ the same criteria in determining if a death is a suicide.

Included in the total number of suicides in Canada in 1995 were the following statistics for completed youth suicide: 22 males and 21 females, aged 10-14; 217 males and 47 females, aged 15-19; and 290 males and 49 females, aged 20-24 (see Table A2 in the appendix). This indicates that a total of 646 young people between the ages of 10 and 24 committed suicide in Canada in 1995 (Statistics Canada, 1997). Canadian youth, especially males between 15 and 24 years of age, are clearly at an elevated risk for suicide. (In Canada suicide is the third leading cause of death for adolescents, after accidents and homicides) (Health and Welfare Canada, 1994). Suicide accounts for at least 14% of all deaths among children 15-19 years old (Rittner et al., 1995).

Although it is not within the scope of this thesis to closely examine Aboriginal people and gay men it is important to note that they are at a considerably higher risk for suicide than the general population. Examination of the research indicates that Native suicide rates vary from community to community but that they are consistently higher than the population-at-large. A recent analysis of available data indicated that the risk of suicide among registered Indians is about 2.5 times that of the general population. However, a study of Aboriginal suicide in British Columbia from 1984 to 1989 found that rates for Aboriginals living off-reserve were similar to those for the general population of the province while rates on reserves were at least twice as high. On the other hand, the results of a mortality study of 35 Alberta reserves and native communities indicated that violence and suicide accounted for almost half the deaths. Surveys of Inuit mortality in Canada also indicated a disturbing rise in suicide rates over the last three decades, with young single males accounting for the largest number of suicides (Health and Welfare Canada, 1994). Sigurdson, Staley, Matas, Hildahl, and Squair (1994), after investigating 204 files from the Chief Medical Examiner's office of all youths aged 24 years and less who committed suicide between 1984 and 1988 in Manitoba concluded that the suicide rate in the Native population was ten times that of non-Natives. Clearly, community-based counseling and educational programs are needed to address the problems of these youth (Gartrell, Jarvis, & Derksen, 1993).

Although there are very solid indications that gay and lesbian youth are also at high risk for suicidal behavior, high quality research is lacking in this area. It has been estimated that gays may account for as many as 30 percent of completed youth suicides each year. Gay men are reported to be more likely to attempt suicide during their adolescent years, while Lesbian women are reported to be more likely to attempt suicide at a later age (Health and Welfare Canada, 1994). Further research is required to clarify the suicidal rates among gay men and lesbian women to enable us to come to some meaningful conclusions.

Youth Suicide in Alberta

Since 1988 Alberta has employed Medical Examiners to replace the coroners' system in an effort to improve the quality of the data collected on the causes of death. The medical examiner is a registered medical practitioner trained to determine causes of death. In Alberta death from intentional self-inflicted injury is deemed suicide. The determination of death is dependent not only on medical and autopsy findings, but also on careful evaluation of circumstances surrounding the death. The medical examiner's decision is not bound by evidentiary rules nor by judicial requirements of proof, however, in a suicidal death, proof of the deceased's intention about taking his/her own life is sought. Therefore, when intent is not readily demonstrated, a "psychological" autopsy may be required (families and/or friends are interviewed to gain the information needed to decide on the intent). Even when a person is disturbed or not in control of his mental faculties and intentionally commits an act which is likely to result in death the medical examiner must consider the intent, regardless of the mental state (Office of the Chief Medical Examiner, 1997).

According to Alberta research officer, Mary Ellen Arnup (personal communication, May 21, 1997), data collection in Alberta is up to date and accurate. She reported that Alberta stopped using the International Classification of Diseases (I.C.D.) codes (a standard used world wide), which was fraught with coding errors, and now uses new straight text format, with reduced chance for error. She admitted that although data collection has improved, the criteria for determining whether a death is a suicide is "not hard and fast" and variations among medical examiners still exist. According to Arnup, even with new strict measures implemented there remains the human element to contend with (i.e., doctor determining cause of death, parents' desire to keep the cause of death a secret). Some medical examiners do not certify deaths from carbon monoxide poisoning as suicides, therefore, it is reasonable to assume that the recorded suicides are, to some degree, underestimates.

Adolescent Suicide Rates and Trends in Alberta

In 1950, 82 suicides were recorded for Alberta. In 1996, Alberta recorded 458 suicides--104 females and 354 males. In the past four decades, Alberta's suicide rate has risen from 8.9 per 100,000 in 1960 to 17.0 per 100,000 in 1996. Alberta experienced its highest suicide rates in 1991 and 1992, with 18.8 and 18.7 per 100,000 respectively (Office of the Chief Medical Examiner, 1997). The latest statistics available for Canada (see Table 3), indicate that in 1995 Alberta recorded the third largest number of deaths by suicide (451), behind Quebec and Ontario. And in 1992, the suicide rate of Alberta (18.3) placed third in Canada, behind the Northwest Territories and Quebec. Furthermore, out of the 458 Albertans who killed themselves in 1996, 82 were between the ages of 10 and 24 (Office of the Chief Medical Examiner, 1997). A further examination of the data reveals important differences exist in age, sex and race.

The suicide rates for the younger age groups, especially youths aged 15 to 24, have increased even more dramatically then those for the older age groups. As Table A3 in the appendix indicates, there were no documented suicides for youths in the 15 to 19 aged group in 1950. However, by 1991, the rate for this group peaked at 25.32 per 100,000 (46 suicides) and leveled off at 12.93 per 100,000 in 1993--when 24 young people killed themselves. The suicide rate rose even faster for youths aged 20-24 from 2.68 in 1950, to a peak of 28.35 in 1977 and 19.83 in 1993, accounting for two, 60, and 40 deaths respectively (Statistics Canada, 1994). This trend parallels the rising youth suicides throughout the rest of Canada as well as in other industrialized nations of the world.

The figures in Table A3 indicate that children aged 5 to 9 rarely commit suicide, while children aged 10 to 14 have low rates. According to Stokes (1994), completed suicide is extremely rare in prepubertal children, but as age increases the suicide rate increases. He concluded that a sharp rise in suicide rates begins after age 14. On the other hand, Lester (1991) claims that the suicide rates for children may be unrealistically low

because they have been misclassified in a society that is unable to accept that young children seek death.

According to data provided by Statistics Canada (1994) in Table A3 and by the Office of the Chief Medical Examiner (1997) in Table A4 (both located in the appendix) it appears that many youth suicides in Alberta were misclassified in the 1950s and 1960s. Although the evidence indicates that there has been a dramatic rise in youth suicide since the 1950s, it is unlikely that so few suicides occurred among Alberta's youth in those earlier years. Therefore, Alberta's current youth suicide rates may be, in part, the result of society's willingness to acknowledge that its young people commit suicide, medical examiners' willingness to label a death from an intentional, self-inflicted injury a suicide, as well a more accurate system of data collection. At the same time, an examination of the statistics indicated that the records maintained by Statistics Canada (1994) and the Office of the Chief Medical Examiner (1997) lack uniformity. This inconsistency impedes researchers in determining the precise prevalence of youth suicide in Alberta.

Gender Differences

An examination of the gender differences in youth suicide from 1950 to 1993 indicates that Alberta males between the ages of 10 and 24 experienced a greater increase in the rate of suicide than females. For example, the suicide rate for males aged 15 to 19 rose from 2.64 per 100,000 in 1951 to 18.99 per 100,000 in 1993. In contrast, the suicide rate for females aged 15 to 19 rose from 0 per 100,000 in 1951 to 6.61 per 100,000 in 1993. Moreover, the suicide rate for males aged 20 to 24 rose from 10.42 (per 100,000) in 1951 to 36.36 (per 100,000) in 1993. On the other hand, for females in this same age category, the rate declined from an unusually high rate of 13.44 (per 100,000) in 1951 to 3.00 (per 100,000) in 1993 (Statistics Canada, 1994). This decline is difficult to explain but one viewpoint widely accepted is an increasing number of young females who attempt suicide are saved. Findings that youth suicide in Albertan males is significantly higher and

climbing at a faster rate are consistent with research on youth suicide throughout Canada and other countries of the industrialized world.

Recent data provided by the Office of the Chief Medical Examiner (1997) indicates that in Alberta young males continue to commit suicide at a much higher rate than young females. As seen in Table 5, in 1996 the rate for males in the 10-14 aged group was 6.4/100,000 compared to the female rate of 0.96/100,000 in the same age group. In actual numbers, six more males than females, between the ages of 10 and 14 committed suicide. The differences were even more significant for the next two age groups. In the 15-19 age group the rate for completed male suicides was 24.0/100,000 compared to the female rate of 4.1/100,000, indicating that 21 more males than females committed suicide. Lastly, in the 20-24 age group the much larger male rate of 42.0/100,000 compared to the female rate of 3.1/100,000 indicates that 39 more males than females completed suicide. These figures indicate that in Alberta youth suicide is primarily a male phenomenon. Furthermore, as evidenced in Table 6, female rates have actually declined since 1994, while the male rates have increased for the 10-14 age group, stabilized for the 15-19 age group and decreased for the 20-24 age group.

Table 5

Alberta 1996 Male and Female Suicides by Age Groups, Numbers, and Rate/100,000

Age Group	Female	Rate/100,000	Male	Rate/100,000	Total	Total Rate/100,000
10-14	1	0.96	7	6.4	8	3.75
15-19	4	4.1	25	24.0	29	14.4
20-24	3	3.1	42	42.0	45	22.7
25-29	9	8.5	35	32.0	44	20.5
30-34	11	9.3	37	30.0	48	19.9
35-39	14	11.0	47	35.0	61	23.0
40-44	16	14.0	37	30.0	53	22.0
45-49	15	16.0	35	35.0	50	25.7
50-54	12	16.0	29	38.0	41	27.1
55-59	3	5.4	16	28.0	19	16.7
60-64	2	4.1	10	20.0	12	12.2
65-69	4	8.8	12	28.0	16	18.1
70-74	6	15.0	10	30.0	16	21.9
75-79	1	0.30**	4	1.7**	5	0.898**
80-84	1	0.45**	4	2.9**	5	1.39**
85-89	1	0.81**	1	1.6**	2	1.07**
90 & over	1	1.5**	3	10.0**	4	4.09**
TOTAL	104	7.4	354	25.0	458	17.0

Note. Rates were based on 1995 population rates from Statistics Canada, 91-213-XPB, Table 1.13 and 1996 projected population rates from Statistics Canada, 91-213-XPB, Table 5.1 respectively. ** Rates calculated as per 10,000. Used with permission from the Office of the Chief Medical Examiner, 1997, Calgary, Alberta.

Table 6

Suicides by Age Groups and Gender for the Province Of Alberta, 1994 - 1996

(Rate/100,000 Population*)

	Female			Male			Total		
Age Group	1994	1995	1996	1994	1995	1996	1994	1995	1996
10-14	1.0	2.0	0.96	5.9	3.7	6.4	3.5	2.9	3.75
15-19	6.6	8.5	4.1	28.1	24.4	24.0	17.6	16.7	14.4
20-24	8.2	4.2	3.1	26.9	49.1	42.0	17.7	27.1	22.7

Note. * Rates based on 1995 population rates from Statistics Canada, 91-213-XPB, Table 1.13 and 1996 projected population rates from Statistics Canada, 91-213-XPB, Table 5.1 respectively. Used with permission from the Office of the Chief Medical Examiner, 1997, Calgary, Alberta.

Alberta's statistics indicate that Native youth are especially vulnerable to suicide. An ethnic breakdown of the 458 suicides recorded in Alberta in 1996 show that two were Black, 398 were Caucasians, 41 were Natives, and 17 were classified as Other. The suicide rate among the Native population is higher than among Caucasians, which in turn is higher than among Black Canadians (Office of the Chief Medical Examiner, 1997). A recent study ("Native Peoples," 1992) confirmed that Natives in Alberta have a higher suicide rate than non-Natives (the rate of suicide for Natives was 2.5 times that for the non-Native population). However, they noted that in some age groups the rate of Native suicide is as much as seven times greater than that of non-Natives.

A breakdown of *youth* suicide by race is unavailable for Alberta, therefore it is presently impossible to precisely determine the ratio of Native to non-Native suicides.

Further research could help determine whether the elevated Native adolescent suicide rates are responsible for Alberta's high adolescent suicide rates.

Regional Patterns of Suicide in Alberta

In Alberta, the 458 suicides that were recorded in 1996 took place in the following regions: 137 in the north rural region; 128 in Edmonton; 97 in Calgary; and 96 in the south rural region (Office of the Chief Medical Examiner, 1997). The data indicates that the north rural area is a special problem area in Alberta for young people (see Table 7).

Table 7

Suicides by Age Group and by Region* for the Province of Alberta, 1996

Age Group	Calgary	South Rural	Edmonton	North Rural	Total
10-14	2	2	1	3	8
15-19	7	5	7	10	29
20-24	11	9	10	15	45
Total	20	16	18	28	82

Note. * The province is divided into North and South Regions by a boundary running approximately through Hobemma. Cases occurring close to the boundary may appear in either region, depending on which Medical Examiner took the case. Used with permission from the Office of the Chief Medical Examiner, 1997, Calgary, Alberta.

Methods Used in Suicide

The methods Canadian youths used for completed suicides in 1995 are provided in Table 8. These data indicate that hanging was the predominant method of all three groups

of youth from 10 to 24 years of age (46.5%), followed by firearms (24.6%). Carbon monoxide poisoning (11.7%) was the third method of choice for youths aged 15-24, while for youths aged 10-14, strangulation or suffocation was used as often as firearms (Statistics Canada, 1997). In contrast, in Alberta in 1996 (see Table 9) overall, across all ages, firearms (27.5%) were the preferred method, followed by hanging (25.3%), and carbon monoxide poisoning (18%) (Office of the Chief Medical Examiner, 1997). However, Alberta's statistics do not provide a breakdown of methods used according to age groups, therefore, it can be hypothesized that youth in Alberta used similar methods to the rest of Canada's youth. In contrast to Lester's (1993) findings that younger children are more likely to use less lethal methods, such as running out into traffic, the present data indicate that children used methods as deadly as those employed by older youth. The only noticeable difference between the three age groups was that children in the 10-14 age group did not use carbon monoxide poisoning as a method of suicide, which is not surprising since this means is not readily available to this age group.

In Alberta in 1996 (see Table 9) differences in the rank order of preferred methods are observed between the males and females of all ages. Most female suicide deaths in Alberta involved drugs (34.6%), followed by carbon monoxide poisoning (16.3%), and hanging (16.3%). Firearms were their fourth method of choice (9.6%). In contrast, male Albertans committed suicide by firearms (32.8%), followed by hanging (28%), and carbon monoxide poisoning (18.4%).

The Alberta findings (see Table 9) are consistent with other data concluding that males and females use different methods of suicide. Males are more likely to choose firearms, hanging, and carbon monoxide poisoning, while females are more likely to use drug overdoses, carbon monoxide poisoning, and hanging. Whereas for men firearms was the first method of choice, women resorted to guns in less than one-tenth of cases. Since the early 1970s, carbon monoxide poisoning has increased for both genders, but more so for men (Health and Welfare Canada, 1994; Lester, 1993).

Although researchers are uncertain why gender differences in methods of completed suicide exist, it has been theorized that men choose more lethal methods because they do not want to survive. The following "completion rates" have been attributed to the three most common methods men employ: hanging 88%; firearms 83%; and car exhaust 78%. On the other hand, overdosing on drugs, which is the method of choice for women, is more amenable to survival. Another possible reason that males and females choose different methods is because males are more experienced with firearms and more likely to own one.

When examining the suicide methods employed by young people in Canada in 1995, no differences in gender were observed in the rank order of methods used (see Table 8). This goes against Lester's (1993) findings that a similar difference in choice of method for suicide is found in adolescents and adults. Furthermore, his assertion that boys use hanging and guns more often than girls is misleading because although more boys complete suicide using these methods, they are the first and second method of choice for both sexes, as was mentioned earlier. Rather, the data in Table 8 indicates that the majority of young people in Canada who committed suicide chose violent methods. This suggests that both sexes had a clear suicidal intent. More research must be conducted to determine if employing violent methods is a new trend in female youth suicide.

Firearms as a method of suicide among young people warrants special mention. The data indicate that 32.8% of males and 9.6% of females, who committed suicide in Alberta in 1996 used firearms (see Table 9). Thus, firearms comprise the largest category of suicide method for men in Alberta, and a significant, though smaller, category for women (Office of the Chief Medical Examiner, 1997). Similarly, in Canada, 36% of the males and 9% of the females who committed suicide during the 1988-92 period used firearms. Furthermore, "only a minority of the guns employed (3%) were handguns; most were long guns (shotguns and rifles) or "other" types of guns (e.g. combat weapons such as semi-automatic or automatic long guns)" (Health and Welfare Canada, 1994, p. 10).

Canadians own an estimated 5.9 million firearms, with the percent of households owning a gun ranging from 15% in Ontario to 67% in the Yukon and the Northwest Territories, with a national average of 23% (Leonard, 1994).

In his study of firearm deaths committed by adolescents and young adults, Leonard (1994) reported that the 276 firearm deaths among 15-24 year olds in Canada in 1990 represented a decline from 1975 to 1990 in this method of suicide. In line with Leonard's data, the 155 firearm deaths among this same age group in 1995 indicates the decline is continuing (Statistics Canada, 1997). This descent could be the result of the 1978 amendment to the Criminal code that has restricted handgun acquisition and ownership of other types of guns. Nevertheless, suicide, involving firearms, remains a significant cause of death for young people between the ages of 15 and 24--especially males.

Table 8

Methods of Youth Suicide, by Sex and Age, Canada 1995

		Ages (years)		
		10-14	15-19	20-24
Total Suicides	M	22	217	290
	F	21	47	49
Self-inflicted Poisoning	M	-	4	13
	F	1	3	7
Gases/Vapours (**carbon monoxide**)	M	-	15	50
	F	-	3	7
Hanging	M	18	95	121
	F	17	24	21
Strangulation/Suffocation	M	2	5	1
	F	-	-	1
Submersion	M	-	3	6
	F	-	-	3
Firearms	M	1	66	77
	F	1	7	5
Cutting & Piercing Instruments	M	-	-	3
	F	-	-	1
Jumping From High Places	M	1	12	9
	F	-	7	1
Jumping or Lying Before Moving Objects	M	-	8	6
	F	1	1	2
Burns, Fire	M	-	1	1
	F	-	-	1
Crashing Motor Vehicle	M	-	5	1
	F	1	1	-
Other Specified Means	M	-	1	2
	F	-	1	-
Unspecified Means	M	-	1	-
	F	-	-	-
Late Effects of Self-inflicted Wounds	M	-	1	-

Note. From Statistics Canada , 1997, Catalogue 84-208-XPB.

Table 9

Methods of Suicide, by Sex, Alberta, 1996

Method	Females	% of Females	Males	% of Males	Total	% of Total
Aspiration	0	0.0	1	0.3	1	0.2
Carbon Monoxide	**17**	**16.3**	**65**	**18.4**	**82**	**18.0**
Drowning	6	5.8	4	1.1	10	2.2
Drugs	**36**	**34.6**	**31**	**8.7**	**67**	**14.6**
Drugs & Alcohol	5	4.8	13	3.7	18	3.9
Electrocution	0	0.0	1	0.3	1	0.2
Fire	1	1.0	3	0.8	4	0.9
Firearms	**10**	**9.6**	**116**	**32.8**	**126**	**27.5**
Hanging	**17**	**16.3**	**99**	**28.0**	**116**	**25.3**
Hypothermia	0	0.0	1	.3	1	0.2
Jump	8	7.7	9	2.5	17	3.7
MV/Train	0	0.0	1	0.3	1	0.2
Other	0	0.0	1	0.3	1	0.2
MV/Driver	0	0.0	1	0.3	1	0.2
Plastic Bag	2	1.9	3	0.8	5	1.1
Stab/Slash	1	1.0	2	0.6	3	0.7
Substance Poisoning	1	1.0	3	0.8	4	0.9
TOTAL	104	100	354	100	458	100

Note. Used with permission from the Office of the Chief Medical Examiner, 1997, Calgary, Alberta.

Parasuicide and Suicidal Ideation

Parasuicide is non-fatal deliberate self-harm; suicidal ideation is ideas or thoughts of committing suicide. Differences exist among researchers about whether suicidal ideation, suicidal attempts (parasuicides), and completed suicide are distinct phenomena. Leenaars and Lester (1995a) believe that parasuicides and completions run in a continuum, and it is the lethality of the event that differentiates attempts from completions. Their evidence is that some suicide attempters go on to complete the act, and that some of those who committed suicide had previously attempted it. On the other hand, Stokes (1994) believes that parasuicide and completed suicide are distinct entities and he points to the different profiles of suicide completers and suicide attempters to support his claim; attempters use less lethal methods, a setting where rescue is more likely, and tend to be young women suffering from either adjustment or personality disorders.

Although both sides present solid arguments, it remains unclear whether suicide and parasuicide are distinct phenomena or aspects of the same phenomena. It seems prudent for professionals working with suicidal youth to integrate both points of view because in either case suicide attempts can be viewed as cries for help which require intervention.

Although official figures for death by suicide are periodically released, no reliable information informs us about the number of individuals who attempt suicide but do not die. Since studies of the prevalence of suicidal ideation and suicidal attempts are rare in Canada and Alberta, it is necessary to consider parasuicidal statistics from other geographical regions, mainly the United States, to estimate the frequency of this behavior in Alberta.

Estimated Rates and Trends of Parasuicide

As is true for completed suicides, the incidence of parasuicides have steadily increased over the years. In the 1950s the most common estimate was eight attempts for every completed suicide, while current research suggests that the attempted suicide rate is at least 10 times the completed suicide rate, and perhaps as high as 100 times (Lester, 1991).

Estimates of suicide attempts to suicide completions vary greatly, as demonstrated in the following parasuicidal data. Steele and McLennan (1995) reported that for young people in the 15 to 24 years age group the ratio ranges from 50:1 to 200:1 attempts for every suicide. Henry, Stephenson, Hanson, and Hargett (1993) estimated that the number of attempts is five times greater than that for completed suicides, totaling approximately 65 adolescent suicide attempts each day in the United States. However, Leenaars and Lester (1995a) cited studies that estimated that the ratio between suicide attempts and completions is about eight to one (one committed suicide for every eight attempts) in the general population, and 50 to 1, or even 100 to 1 in teenagers. On the other hand, Grosz and associates (1995) indicated that nearly 9 percent of adolescent respondents acknowledged a previous suicide attempt, and over half of the attempters made multiple attempts. In addition, the authors reported that it has been estimated that for every completed suicide among adolescents, there are 50 to 200 suicide attempts. Levy, Jurkovic, and Spirito (1995) and Stokes (1994) reported that studies of the prevalence of suicidal attempts among adolescents indicate that an average of 10% of adolescent respondents report having made a suicide attempt. Finally, Zimmerman (1995b) reported that there are 50 to 100 attempters for each completed adolescent suicide per year, leading to an annual attempter population of perhaps 250,000 to 500,000 individuals.

Although variations exist amongst researchers the consensus is clear: the incidence of parasuicidal behavior in young people is unacceptably high. Furthermore, although the numbers for youth parasuicide far exceed suicide completions, they are still underestimates. It has been suggested that many suicide attempts are reported as accidents to avoid the stigma associated with suicide. Under-reporting results in suicidal attempters not receiving appropriate treatment.

As Steele and McLennan (1995) noted, the wide variations in findings probably reflect the differences among the studies in the types of population surveyed, the methods by which subjects were recruited, and the means by which the information was elicited.

However, although discrepancy regarding parasuicidal behavior exists, it is clearly documented that for adolescents suicide attempt is one of the strongest risk factors for death by suicide; a previous suicide attempt by an adolescent increases his/her risk of eventual suicide tenfold (Levy et al., 1995). In the study by Sakinofsky et al. (as cited in Health and Welfare Canada, 1994), almost two percent of their subjects had committed suicide within the first year of follow-up. Furthermore, persons who attempted suicide were on average 40 times more at risk of suicide than individuals in the general population with no history of parasuicide.

Gender differences exist in parasuicide. However, even though it was previously noted that adolescent suicide is mainly a male phenomenon, parasuicide appears to be predominantly a female phenomenon; about eight times more females attempt suicide, while four times more males than females complete it (Levy et al., 1995). The Canadian Institute of Child Health (1994) reported that girls from 10 to 14 years are hospitalized for attempted suicide at a rate five times that of boys. However, boys aged 10 to 14 actually commit suicide at a rate four times that of girls. The disparity between attempts and completions is one of the most vexing mysteries in suicidology.

Thus far research has been unable to explain gender differences in parasuicides. It is important to recognize that the methods utilized in parasuicides tend to be less lethal than those in completed suicides, therefore, it seems reasonable to conclude that the majority of parasuicides do not have a clearly lethal intent (Health and Welfare Canada, 1994).

Estimated Rates and Trends of Suicidal Ideation

Although statistics vary in published research, suicidal ideation has been found to be widely spread among young people. Approximately one million young people are thought to move in and out of suicidal crises each year (Shagle & Barber, 1995). The incidence increases steadily from very young children to older adolescents. Pfeffer (1986) reported that about 12% of elementary school children had suicidal thoughts. Among junior high school students, one study indicated that 36% had thought about suicide at some point

in their lives and 7% had actually attempted suicide. And the incidence of suicidal ideation varied for high school students from 53% to 63% of high school students having reported some degree of suicidal ideation (Leenaars, 1993). Additional surveys of high school students in the United States have reported that 34% of students have had suicidal ideation in the previous year and 63% have had suicidal ideation at some point in their lives (Lester 1991). Other studies indicated that young girls are far more likely to contemplate suicide than young boys. A survey in Quebec reported that 10% of girls and 4% of boys 12 to 14 years of age had considered suicide in the six months prior to the survey. In British Columbia 20% of Grade 8 girls and 13% of Grade 8 boys reported that they had considered suicide in the past year (Canadian Institute of Child Health, 1994). Unfortunately we lack reliable data on whether this incidence is changing. Longitudinal and comparative studies are required to determine if the incidence is changing over time and whether the incidence varies among provinces and nations (Shagle & Barber, 1995).

Data Analyses

The difficulties encountered in researching this thesis warrant special mention. These difficulties touch upon five separate areas: (a) selection of subjects, (b) incomplete data, (c) inaccuracy of data, (d) interpretation of data, and (e) inconsistencies in data.

First, most studies reported in the research literature employ relatively small samples. Generally, the larger the sample size the more confidence we have that the population in question is adequately represented and conversely, the smaller the sample size the less confidence we have that the population in question is adequately represented. Another sample limitation that most of the researchers did not acknowledge is the use of volunteers. As Borg and Gall (1989) noted, "volunteer groups are rarely representative . . . [therefore,] the results of studies using volunteer groups can probably be safely applied to other volunteer groups, but not to the population from which the volunteers were drawn" (p. 180). Although it may be extremely difficult to conduct research without volunteers,

this limitation should have been given closer scrutiny in those studies employing volunteers.

Second, the data were often incomplete. For instance, the Office of the Chief Medical Examiner does not provide suicide data according to race when youth are involved. Therefore, it was difficult to determine if suicides by Alberta's Native youth contributed significantly to our elevated suicide rates. In addition, official data are not kept on parasuicides in Alberta which is understandable because disagreement exists among physicians and other officials as to what constitutes such behavior. Nevertheless, incomplete data hinders research efforts.

Third, the data on completed suicides, parasuicides, and suicidal ideation are, generally speaking, unreliable. Although suicides are reported more openly than in the early 1900s, under-reporting is still a major obstacle. Currently an unknown number of deaths are recorded as accidental while actually being suicides. Therefore, almost all suicidologists regard official statistics as *underestimates* of the true frequency of suicide (Health and Welfare Canada, 1994; Steele & McLennan, 1995). Furthermore, although data collection in Alberta has been revised and is "up to date and accurate" (Mary Ellen Arnup personal communication, May 21, 1997), variations still exist among medical examiners assessing a self-inflicted death as suicide. For instance, a study of 350 Ontario coroners indicated that 33 percent of the coroners surveyed were reluctant to certify a death as suicide, and 38 percent of the coroners admitted that even where suicide was probable they would certify the death as undetermined or simply fail to denote the manner of death. The reasons they cited for this policy included: the emotional effect on the family, life insurance considerations, stigmatization of the family, possible legal consequences, and religious and moral considerations (Health and Welfare Canada, 1994).

Fourth, data are sometimes interpreted inaccurately. For instance, statistics from other countries are compared with Canadian statistics even though no standardized criteria used by coroners exists for determining suicide. In addition, comparisons made in terms of

age-standardized rates are frequently inaccurate because data collection strategies vary from country to country (Health and Welfare Canada, 1994). Even across Canada comparisons of suicidal statistics are imprecise, because there is no assurance that all the provinces employ the same criteria in determining when a death is suicidal. Furthermore, when authors only provide the *rates* of youth suicide in their publications without including *the actual raw numbers*, it is difficult to ascertain how relevant percentage increases or decreases really are. Sometimes the absolute numbers are so small that increases or decreases are exaggerated by slight variations in the particular years chosen for comparison. Moreover, it can be misleading when researchers compare current statistics with those from the past, unless they have first demonstrated that the data collection and verification of suicides were similar in both cases.

Finally, I have found that discrepancies exist between the statistics provided by Statistics Canada and those provided by Alberta's Office of the Chief Medical Examiner. Statistics Canada (1997) indicated that a total of 451 Albertans committed suicide in 1995--374 males and 77 females, whereas Alberta's Office of the Chief Medical Examiner (1997) reported a total of 457--378 males and 79 females. Statistics Canada (1994) indicated that in 1993 Alberta had 415 suicides, while the Office of the Chief Medical Examiner (1997) reported 428. Furthermore, the Alberta suicide rates provided by Statistics Canada in Table A3 differ from the Alberta suicide rates provided by the Office of the Chief Medical Examiner in Table A4. For 1993 Statistics Canada recorded a rate of .47 for children aged 5-9, whereas the Office of the Chief Medical Examiner did not record any deaths for this age group. For the same year Statistics Canada recorded rates of 12.93 for those aged 15-19, and 19.83 for those aged 20-24. In contrast, the Office of the Chief Medical Examiner recorded rates of 12.2 for youths aged 15-19, and 21.7 for youths aged 20-24. An examination of table A3 and table A4 (in the appendix) reveals further discrepancies.

Summary And Discussion Of Statistical Data

Our examination has indicated that youth suicide is a worldwide concern; albeit in varying degrees. Our examination also reveals no uniform pattern among various nations, rather, individual countries are experiencing youth suicide in individual ways. Some countries have witnessed dramatic increases while others have seen dramatic decreases, and for some the rates are stable. Moreover, some countries experienced increases in youth suicide for males but not females, or vice-versa.

In Canada youth suicide rates have risen rapidly and are among the highest in the industrialized world. The youth suicide rate in Canada outranks that of the United States, with Canada third in reported teen suicide rates in the industrialized world (13.5 per 100,000), while the United States ranks fifth at 11.1 per 100,000 (The United Nations Children's Fund, 1994). Since 1970 suicide rates for youth aged 15-24 have increased by 50% (Lester, 1993). Although some of the rise may be due to improved reporting, there is a consensus among all serious researchers that the number of suicides has risen substantially.

Suicide is currently the third leading cause of death for Canadian adolescents (after accidents and homicide) and accounts for at least 14% of all deaths among children 15-19 years old. Statistics indicate that Native youth throughout Canada are especially vulnerable to suicide, with estimates varying from 2.5 to seven times that of non-Natives. Gay and lesbian youth are also thought to be at increased risk for suicide.

In Canada, Alberta ranked third in the total number of suicides recorded in 1995, and second in rates in 1993. As with the rest of Canada, youth suicide in Alberta was found to be primarily a male phenomenon. Since 1994 female rates in Alberta have actually declined whereas male rates have increased for the 10-14 aged group, stabilized for the 15-19 aged group and decreased for the 20-24 aged group. Suicide rates for youths aged 15 to 24 have increased more dramatically then those for the older age groups. In Alberta, the majority of youth suicides took place in northern rural communities. It is possible that

Alberta's high ranking in Canada may be, in part, the result of its current commitment to report every suicide and to its more accurate data collection system.

With regards to gender differences the data indicate that young males complete suicide at a much higher rate than young females; up to four times more males than females die from suicide. On the other hand, young females attempt suicide at a significantly higher rate; with up to eight times more females than males attempting suicide. With respect to suicidal ideation, more young girls contemplate suicide than boys. It has been suggested that these gender differences reflect different levels of motivation to die, but thus far no convincing explanation has been put forward on this topic.

Both male and female youths employed the following methods of suicide: hanging (46.5%), firearms (24.6%) and carbon monoxide poisoning (11.7%) (Statistics Canada, 1997). Although separate data on methods used by youth were not available, overall, Albertans used the following methods: firearms (27.5%), hanging (25.3%), and carbon monoxide poisoning (18%) (Office of the Chief Medical Examiner, 1997). With regard to parasuicide, the majority of youth suicide attempters use less lethal means, making rescue more possible. However, research is lacking on suicide attempts and suicidal ideation in Alberta.

Although an increasing numbers of young Albertans engage in self-destructive behaviors (suicide, parasuicide, and suicidal ideation), we do not fully understand the causes behind this phenomenon. In an attempt to cast some light on basic causes the next chapter discusses the factors that increase the likelihood of suicidal behavior in youth. However, before turning to an analysis of these risk factors, I have included personal profiles of three Canadian adolescents to bring the suicide statistics to a more human level.

The Human Side of Statistics

It is easy to forget that suicide statistics represent human death. Therefore, to provide a more compassionate dimension to the statistics presented in this chapter I will conclude by featuring profiles of three Canadian adolescents.

The following profiles of Chrissie Fleming (McConnell, 1997), Thor Kamara (Turner, 1996), and Allison Dawn McConnell (McKeen, 1997) were taken from local newspapers. In all three cases the young people and their families came forward with their story to try to remove some of the stigma and shame society attaches to suicide, hoping that by doing so, others faced with suicidal crises will seek help.

Chrissie Fleming of Edmonton, Alberta

When Chrissie Fleming was 15 years old she almost killed herself. A bright, articulate youngster who seemed to have everything going for her, she had a good relationship with her parents, good school marks, and good friends. Her transfer to high school for grade 10 appeared to go smoothly, and added to her circle of friends. However, things began to deteriorate for Chrissie when her older sister Leah, who had lived for six month on her own, moved back home. Chrissie, who had always felt secure about her family's love, began to feel unloved and to entertain suicidal thoughts. This previously happy, optimistic youngster experienced continuous sadness, pain, loneliness, and feelings of "darkness." Her school work and marks suffered (grades that had been 80s and 90s in junior high now fell into the 50s), and for the first times she did not care. As she stated, "'You get good marks so you can be what you want to be. I didn't plan on living that long'" (McConnell, 1997, p. A10).

Although she told friends she was unhappy, she did not confide in her parents. Thus, they had no idea that their daughter was in so much pain. As her mother later reported, "'She didn't show it. Most of the time she looked like her usual self. So you put it down to her being in high school'" (McConnell, 1997, p. A10).

Meanwhile, Chrissie was planning her demise. A few times, holding the car keys in her hand, she thought about how easy it would be to "'slip out the door and into the garage'" (McConnell, 1997, p. A10). Yet, in moments of clarity she remembered that life had once been better and perhaps it could be again. Yet, as she recalled, "'When I was in

the valley and everything was dark and cloudy and misty and spooky, I couldn't find the light. I was so close to doing it'" (McConnell, 1997, p. A10).

In the midst of her suffering Chrissie reached out for help. She carefully constructed a poem for her mother, describing her pain: "'I wish you could hear my cries. Maybe if I yell you'll hear me'" (McConnell, 1997, p. A10). Her mother heard and responded. Right after reading the poem, her mother talked to Chrissie and the next day arrangements were made for Chrissie to receive professional counseling, which lasted for most of the next year. During psychotherapy, individually and with her mother, Chrissie slowly opened up and learned to share her feelings.

Presently, at 17 years of age, life has become more normal for Chrissie--she has bad days and good days. But, for the most part, she is enjoying life once again. Thinking back to the time when she had considered suicide Chrissie is not sure what brought her to the brink of death. However, she is certain that it was not school, her parents, or even jealousy of her sister. She is equally unsure of what stopped her from committing that final desperate act. As she stated, "'If I hadn't given my mother that poem when I did, I would have done it. If I hadn't started seeing a counselor, I would have done it. Definitely '" (McConnell, 1997, p. A10).

Thor Kamara of Ontario

On December 14, 1994, 14 year-old Thor Kamara, after yet another battle with his parents, was ordered to bed at 9:30 p.m. He was grounded and would not be allowed to go out after school with his friends, watch TV, or listen to the radio. Two hours later, when his parents were fast asleep, he tiptoed out of his bedroom and out onto the balcony of his family's 16th floor apartment. Perching himself on the railing's most southerly end he waited for perhaps a minute or two, and then jumped. Miraculously, his fall was broken by a 30-foot pine tree; when he hit the snow-crusted ground, he landed face down, causing multiple head fractures, in addition to a broken arm. He was found unconscious.

Thor woke up in the hospital nine days later. On the Friday after his jump he had a small part of his right forebrain removed. By Christmas he could open his eyes and carry on a bit of conversation. He stayed at the Hospital for Sick Children until the end of January when he was transferred to the Hugh MacMillan Rehabilitation Centre.

Thor remains blind in his left eye, due to optic nerve damage, and has lost peripheral vision in his right eye. Plastic surgery has restored his face to boyish good looks, however, a scar extending from ear to ear is still visible.

Why did a boy of 14 who enjoyed soccer, science-fiction, and drawing try to take his life? His mother reported her shock when the police informed her of the suicidal attempt: "'It was unthinkable. Somebody doesn't go out and try to kill themselves because they didn't do the dishes.'" She added, "'He could never really give us a really clear reason why he did it'" (Turner, 1996, p. E2). According to Thor's mother, he never told her he was depressed, and she never realized he was, although she did notice that he did not have many close friends.

Thor, now a shy Grade 10 student, recalled that at the time of the suicide attempt he had come to the conclusion that he could not please his parents. He added that he found the transition from elementary school to high school difficult and his grades were suffering. Furthermore, there were frequent arguments at home. Thor felt increasingly isolated and believed he had no one to talk to or to turn to for help. "'I felt that it (suicide) was basically my only option, rather than having to go through all of these problems'" (Turner, 1996, p. E2). Thor indicated that he jumped because he thought that it would be the "'quickest and least painful way to die'" (Turner, 1996, p. E2). Moreover, he claimed that he only began thinking about jumping five days before he actually did it. However, when he realized he had survived he actually felt relieved.

Thor indicated that he has become less demanding of himself these days. In addition, his father moved out in April relieving a lot of the pressure at home although Thor misses him. Thor advised other young people who may be thinking about suicide to "'find

someone to talk to instead. They should also try to think of the good things in life and what they'll be putting their family through. I could have found another option. I could have found help. We all have our time as to when we're going to die. I believe God didn't want me to go quite yet'" (Turner, 1996, p. E4).

Allison Dawn McConnell of Edmonton, Alberta

On January 29, 1996, 16 year-old Allison Dawn McConnell committed suicide in the basement of her Edmonton home. From about the age of 13 Allison had episodes of rage directed at her mother, some of which left her mother's arms bruised and bloody. During this time her mother developed depression and separated from her father, which further increased Allison's stress.

Although her parents reconciled, Allison's problems continued. She even threatened her parents' lives on occasion and would conspicuously take and hide knives, making sleep difficult for them. Allison always apologized after these rages and admitted that she was unable to control herself during them.

Allison was assessed by doctors, diagnosed with clinical depression, and put on medication. However the problems continued. Her parents sought further help from several institutions and agencies, and finally brought a counselor into their home for family therapy.

In addition to psychological difficulties, Allison had troubles with boys; although her parents considered her a "social butterfly." Furthermore, Allison had difficulty with her school work; in her diary entry she referred to herself as "not smart," however, outside of class she was willing and able to help others with their personal problems.

Her parents speculated that perhaps Allison suffered a more severe form of mental illness than diagnosed; during one psychological assessment she reported hearing voices and seeing shapes.

Allison had previously attempted suicide during November, 1995. However, on the Thursday before her death, she had discussed the attempt with her counselor and her

parents and had vowed, "'Mom, I promise I'll never do that again'" (McKeen, 1997, p. G1). Her parents reported that although Allison looked content and seemed happy on her last few days of life, her journal was full of dark, disturbing thoughts and talk of suicide. On January 27th, two days before her death, she wrote a crude cost/benefit analysis about ending her life. She concluded it with: "'there are obviously more pros than cons'" (McKeen, 1997, p. G1). According to her parents, Allison was an emotionally ill girl who had struggled with life before deciding to end it (McKeen, 1997).

CHAPTER III

Risk Factors Associated With Youth Suicide

In Canada suicide is among the three most common causes of death in the 15- to 24-year-old age group. Although several explanations have been offered for the high incidence of youth suicide, they are conflicting and often they do not provide the range of accountability we look for in a good explanation. The end result is that it is difficult to determine the exact causes why young people commit suicide. My research has led me to conclude that a common denominator of risk factors are associated with suicide in this age group and that suicidal behavior increases when these risk factors interact with specific vulnerabilities. Although in real life these variables often exist in clusters--a complex interaction of biological, psychological, and environmental factors-- for the purpose of this thesis they have been separated to help clarify the multifactorial origins of this phenomenon.

Biological Risk Factors Associated With Youth Suicide

Genetics and Serotonin Deficiency

Recent studies have indicated that certain biological factors constitute an increased risk factor for suicidal behaviors in youth (Grosz et al., 1995; Health and Welfare Canada, 1994; Henry et al., 1993; Kienhorst, 1994; Stokes, 1994). Most of this research has focused on biochemical changes which make youth more vulnerable to affective disorders such as depression.

Biological research involving twin studies and adoption studies suggests that suicidal risk factors may be transmitted genetically (Grosz et al., 1995; Health and Welfare Canada, 1994; Stokes, 1994). Grosz and associates reported that greater similarities for suicidal behavior were found among twins, and that similarities were higher in monozygotic (twins who share all the same genes) than dizygotic (twins who share only half their genes) twins. Studies have also found significantly higher suicide rates in the biological relatives of adoptees who had completed suicide, as compared to matched

adopted controls. And studies involving family histories have shown that completed and attempted suicide is significantly higher among immediate relatives of adolescent suicide victims and attempters.

Although studies have provided evidence that genetic inheritance is a risk factor for youth suicide, it is difficult to differentiate specific genetic factors from the presence of a family member who serves as a role model. It appears to some researchers that the major inherited risk factor may be an inability to control impulsive behavior (Health and Welfare Canada, 1994).

A neurobiological basis for suicidal behaviors has been proposed by several researchers (Grosz et al., 1995; Health and Welfare Canada, 1994; Kienhorst, 1994; Stokes, 1994). Kienhorst reported that a deficiency of serotonin, a neurotransmitter that modulates the action of other brain chemicals, is responsible for a variety of violent and impulsive behaviors associated with depression. Autopsy data confirm that low levels of serotonin are associated with suicide. Further studies indicate that serotonin-deficiency suicides tend to be characterized by careful planning. Although it remains unclear why some people have low serotonin levels, research has found that men tend to have lower levels than women, which may contribute to the higher number of male suicides. Researchers believe that by raising serotonin levels with antidepressant medications, like Prozac and Zoloft, depressed people are less likely to act on suicidal impulses. However, since most of the research on serotonin has been done with adults, further studies must be carried out with youth to determine if low levels of serotonin are also associated with youth suicide.

A Canadian study recently examined the neurochemistry of parasuicide (parasuicide is defined as non-fatal deliberate self-harm). Suicide attempters were found to have higher urinary noradrenaline than patients who merely considered suicide but did not attempt it. However, these findings will have to be corroborated with further research before

biochemical associations with suicide can be clearly identified (Health and Welfare Canada, 1994).

Learning Disabilities and Physical Disabilities

Leenaars (1993) found that learning disabilities and physical disabilities heighten the risk of suicide. Although about 5 percent of children in the general population are diagnosed as having a learning disability, Leenaars found that 50% of the suicidal youth were learning disabled. It is possible that youth diagnosed as learning disabled experience more pressure from parents and more derision from their peers resulting in their higher stress levels which, in turn, increase their suicidal risk.

Leenaars (1993) also reported that physical illnesses such as anorexia, bulimia, diabetes, epilepsy, and muscular dystrophy are associated with suicidal behavior. People with physical disabilities at increased risk for suicide include those with spinal injures that have resulted in quadriplegia or individuals who have undergone limb amputations. Individuals with HIV virus and AIDS-related syndrome (ARC) are also at higher risk.

Psychological Risk Factors Associated With Youth Suicide

Depression

A wide range of researchers have found a strong association between depression and youth suicide (Grosz et al., 1995; Health and Welfare Canada, 1994; Leenaars, 1993; Lester, 1993; Ramsey, 1994; Rittner et al., 1995; "Teen Suicide," 1994; Thompson, Moody, & Eggert, 1994). These researchers agree that although depression is prevalent in youth suicide, depressed youth are not necessarily suicidal. Neither are suicidal youth inevitably depressed. Lester found that a diagnosis of major depressive disorder increases a person's chance of committing suicide from about 1.5 percent (in a normal population) to 15 percent. Grosz and colleagues also found that youth with depressive disorders were over-represented among suicide attempters. Health and Welfare Canada noted that almost one-third of parasuicidal patients were diagnosed with major depression. Moreover

depression was found among almost 70% of suicide completers. Lastly, Thompson and associates found that depression was the strongest indicator of high suicide ideation.

The American Psychiatric Association (1994) states that "the essential feature of a Major Depressive Episode is a period of at least 2 weeks during which there is either depressed mood or the loss of interest or pleasure in nearly all activities. In children and adolescents, the mood may be irritable rather than sad" (p. 320). Grosz et al. (1995) reported that the following behaviors typify depression in youth: changes in mood and behavior (i.e., increasing feelings of dejection, isolation, serious disturbances of appetite and sleep); changes in verbal expression (i.e., talk of disappointment, exclusion, blame, suicide, dying, abandonment, and helplessness); excessive aggressiveness; change in school performance; decreased socialization; somatic complaints; loss of energy and; unusual change in appetite and weight. Anorexia, promiscuity and drug abuse have also been associated with depression in youth.

Although depression is a significant risk factor in youth suicide the majority of depressed youth never attempt suicide; therefore, it is clear that other risk factors are involved in youth suicide. One hypothesis is that many depressed youth are insulated from their suicidal impulses by friendship networks and parental support.

Hopelessness

Hopelessness, the expectation that nothing can be done to resolve life's difficulties, has been reported as a strong predictor of youth suicide (Grosz et al., 1995; Heckler, 1994; Lester, 1993; Levy et al., 1995; McLean & Taylor, 1994; Pfeffer, 1986; Stokes, 1994). McLean and Taylor found that hopelessness contributes to depression and suicidal behavior, while Lester reports that the symptom of hopelessness was more strongly associated with past, current, and future suicidal behaviors in youth than any other symptoms of psychological distress. Pfeffer reported that although hopelessness is an important component of depression, it is apparent in patients with other psychiatric disorders besides depression. She also noted that hopelessness correlates higher with

suicide intent or suicidal behavior than depression. Stokes' findings corroborated Pfeffer's. Levy et al. reported that studies with psychiatric inpatient children found that hopelessness predicts suicidal intent and ideation independent of depression.

Although these studies indicate that the degree of hopelessness appears to be a more critical factor for suicidal risk than the degree of depression, hopelessness is not a general risk factor for suicide among youth as it is among adults. Grosz and colleagues (1995) found that the association between hopelessness and suicide in youth varied according to specific characteristics of subject samples. For instance, a positive correlation was found between suicidal ideation and hopelessness in studies involving psychiatric inpatients and Asian students in the United States. However, this association was not found in normal children or in urban female suicidal youth. Likely youth who are isolated experience more hopelessness.

Alcohol and Substance Abuse

Sigurdson and associates (1994) reviewed youth suicide in Manitoba and found that alcohol was involved in 50% of the suicides. Moreover, a high percentage of youth were alcohol-impaired at the time of suicide. The majority of suicides involving alcohol and higher blood alcohol levels involved Metis and Native youth, especially those living on reserves. Health and Welfare Canada (1994) found that 21% of suicide completers were identified as alcoholics. After reviewing risk factors for youth suicide, Brent (1995) found that between one and two-thirds of suicidal youth are also affected by substance abuse. Grosz and colleagues (1995) found that both alcohol and substance abuse were associated with youth suicide, and they noted that intoxication frequently preceded suicidal behavior.

Personality Traits and Conduct Disorder

Some data suggest a link between certain personality traits and suicidal ideation in youth (Grosz et al., 1995; Lester, 1993). Part of this data came from Lester who found that suicidal youth, compared to nonsuicidal youth, are more often emotionally disturbed, have lower self-esteem, are more aggressive, more delinquent, and more impulsive. Grosz and

colleagues found that a diagnosis of conduct disorder before age 15 is a fair predictor for adolescent suicide and, as well, that a diagnosis of conduct disorder is one of the main risk factors for completed suicide, especially among males. Furthermore, conduct-disordered adolescent inpatients are significantly more suicidal than patients with major depression, even though they are significantly less depressed.

However, it remains unclear whether personality disorders can be diagnosed reliably before adulthood since personality is still in the process of development in youth (Grosz et al., 1995). Therefore the connection between suicidal ideation and personality traits, while persuasive, is hard to verify.

Other Psychological (Psychiatric) Disorders

Brent (1995) reported that over 90% of all youthful suicide victims had suffered from at least one major psychiatric disorder. After reviewing psychological autopsies of youth suicide, longitudinal follow-ups of high-risk cohorts, and epidemiological studies of suicide attempters, he found that mood, psychotic, disruptive, and substance abuse disorders were all strongly correlated with suicide. Disruptive disorders were found to be more significant factors for males, and affective illness for females. Suicidal risk was further increased for youth with both substance and affective disorders. Health and Welfare Canada (1994) also found that the majority of suicide studies report the presence of some mental disorder in suicide victims. They noted that mood disorders, particularly depression, are most common in completed suicide with estimates ranging from 30% to 70%. They also found that substance abuse disorders, schizophrenia and, to a lesser extent, personality disorders, anxiety disorders and eating disorders were also common in completed suicides. Suicide risk for persons with schizophrenia (a psychotic disorder), especially young males, has been estimated to be from 15 to 75 times greater than among the general population.

Since the majority of suicide victims have been identified with at least one serious psychiatric disorder, the prevention of youth suicide requires the proper assessment and

treatment of these conditions. Furthermore, professionals diagnosing youth with these disorders require adequate support systems in place in order to intervene effectively. Finally, these youth must be observed for suicidal ideation and protected from acting on these thoughts. While these are ideal recommendations the reality is that most professionals have neither the time nor the resources to effectively monitor these youth.

Cognitive Functioning

McLean and Taylor (1994) concur with Pfeffer (1986) that suicidal youth are characterized by numerous cognitive deficits, and as a result of these deficits they may not be able to assess reality in such a way as to work out alternative solutions to their problems. The resulting helplessness or hopelessness makes suicide appear a viable option. Heckler (1994) added that the thinking of suicidal persons is polarized, and their ability to think evenly is continuously compromised; healthy options go unnoticed and their thinking eventually fixates almost entirely on pain, until a breaking point is reached and suicide appears to be a viable option. (This viewpoint supports my observations as a clinician and suicide crisis line worker that troubled youth need help in generating alternatives to problems and support in making decisions and implementing solutions.)

Previous Attempts

A history of previous attempts is a strong predictor of youth suicide (Grosz et al., 1995; Kalafat & Elias, 1995; Lester, 1993; Stokes, 1994). Grosz and colleagues found that youth who had been hospitalized as a result of their suicide attempts were at an increased risk for eventual death by suicide. Stokes found that more than 50% of completed suicides had a history of attempted suicide. Moreover, the suicide rate of attempters was found to be markedly higher than that of the general population. Lester found that although many suicide attempters engaged in repeated nonlethal attempts, they were still more intent on suicide than non-repeaters. He suggests that repeaters differed from non-repeaters in the following ways:

1. School: more difficulty, less success, more truancy, less education

2. Higher unemployment rates

3. Depression and hostility

4. More stressful life events

5. Parents more likely to be alcohol abusers, hostile, indifferent or domineering.

He found that repeaters were more deviant, more psychiatrically disturbed, more delinquent, and less socialized than first-time attempters.

Although we know that repeaters are at a higher risk for suicide we are unable to accurately predict lethal suicidal acts. Therefore, all threats and attempts must be taken seriously. As Leenaars (1993) noted, most suicidal youth experience pain, rejection and deprivation, and the loss of love and support. Perhaps they attempt suicide because their intolerable pain continues and their difficulties have not been resolved. Therefore, to lessen their risk of repeating, we must provide the support they need to resolve or at least lessen their problems.

Social/Environmental Risk Factors in Youth Suicide

Family Risk Factors

The family system is a central factor in suicidal behavior among young people (Adams, Overholser, & Lehnert, 1994; Brent, 1995; Corey, 1996; Grosz et al., 1995; Heckler, 1994; Henry et al., 1993; Leenaars, 1993; McLean & Taylor, 1994; Wagner, Cole, & Schwartzman, 1995). Although variations exist among families, the following are associated with suicidal behavior among youth: high levels of conflict, ineffective family communications and interaction patterns, poor relationships, changes in the composition of the family, parental abuse, parental psychopathology, history of family suicide, socioeconomic status, parental alcohol use, high parental expectations, residential mobility, adolescents beginning their own families, and availability of guns. These family risk factors usually interact and overlap with one another to further increase suicide risk in youth.

Conflict. The families of youth suicide attempters are typically characterized by high levels of unresolved conflict (Adams, Overholser, & Lehnert, 1994; Heckler, 1994; Henry et al., 1993; Lester, 1993; Levy et al., 1995; Shagle & Barber, 1995). Adams, Overholser, and Lehnert found that adolescents who had attempted suicide perceived their families as more chaotic than adolescents who had never attempted suicide. Suicidal adolescents reported that their families engaged in power struggles, practiced ineffective methods of control, lacked problem-solving skills, and found it difficult to adapt to change. The seriousness of suicidal intent among adolescent suicide attempters was found to be directly related to the degree of family dysfunction reported by the adolescents. Moreover, the strongest predictors of suicidal behavior for teenagers were perceptions of their family environments. Levy, Jurkovic, and Spirito discovered that conflict with parents preceded suicide in 40% to 76% of the samples.

Several researchers have suggested that the family may project its collective pain onto one child, identifying him or her as the problem, the bad one. The youth, in turn, comes to believe that he/she is the source of this conflict, internalizes it, and develops a self-rejecting attitude. Unable to cope with the resulting distress, the youth turns to suicidal thoughts.

Ineffective family communications and interaction patterns. Research indicates that families of suicidal youth are characterized by ineffective communication. They encounter more conflict when discussing a problem, have less effective methods of communication, make fewer positive statements to one another, experience less spontaneous agreement, achieve less consensus, and describe themselves as less effective than families with nonsuicidal youth (Lester, 1993). These families tend to maintain excessively rigid interaction patterns that discourage adolescents from trying new family roles. Studies have indicated that family discord precipitates hopelessness which, in turn, predicts suicidal ideation. It seems likely that ineffective family communications isolate suicidal youths and prevent them from accessing the emotional support they require.

Poor Relationships. Henry and colleagues (1993) noted that suicidal youth reported problems with their parents more often than control groups of non-suicidal youth. For example, 52% of adolescent suicide attempters reported that they had poor relationships with their parents. Lester (1993) found that high school and college students who had recently experienced suicidal ideation had worse relationships with their fathers. However, Adams and associates (1994) found that suicidal adolescents, compared to nonsuicidal high school students, reported more difficulties with their mothers. They also described their relationships with their mothers as characterized by power struggles, ineffective control, disagreement over what is important, and poor communication on every level. At the same time, both the suicidal youth and the control group did not differ in their perceptions of father-adolescent relationships; perceived dysfunction in father-adolescent relationships was relatively high across both groups.

Suicidal youth tend to rate their parents' marriages as problematic and perceive family members as emotionally disengaged and family relationships as hostile. Furthermore, recurring conflicts and jealousy among siblings are also common among suicidal youth. Interestingly, some studies have noted that firstborn females constitute a disproportionately large percent of suicide attempters although no convincing explanation has been advanced to explain this phenomenon (Henry et al., 1993).

Clearly, the lack of cohesiveness and lower emotional bonding in families of suicidal youth increases their risk of suicide. Henry and associates (1993) reported that 78% of the suicide attempts in their study followed a fight with a family member. Further research is needed to clarify whether poor relationships with fathers have more impact on suicidal ideation than poor relationships with mothers.

Changes in the composition of the family. Youth who have undergone changes in the composition of their family due to death or divorce are at an increased risk for suicidal behavior (Grosz et al., 1995; Henry et al., 1993; Lester, 1993). Lester found that parents of suicidal youth tend to divorce and remarry more. Henry and associates found that one of

the most commonly reported precipitating events leading to suicidal behaviors in youth is the loss of a family member or close friend through death, divorce, or chronic mental illness. Suicidal gestures and threats increase following parental separation, while completed suicides are linked with parental death. However, even the death of a pet can serve as a precipitating event for suicidal behaviors among certain adolescents, especially those with pre-existing risk factors such as depression and hopelessness. It seems that many suicide attempts by youth are impulsive reactions to loss.

These findings support my own clinical observations. For example, a young female I counseled became suicidal upon the death of her mother. However, further therapy revealed that multiple factors were involved including lack of support system, guilt, isolation, and self-hatred.

Parental abuse. Lester (1993) found that high school and college students who had recently experienced suicidal ideation had suffered more physical abuse from their parents than non-suicidal students. Grosz and associates (1995) found that out of 159 adolescent suicide attempters seen in a hospital emergency room, one in eight was attributed to parental abuse. Henry and colleagues (1993) reported that physical violence during adolescence has been identified as a precipitating event for suicide attempts, while sexual abuse within families has been found to predict suicidal behaviors in adolescent females. They suggested that youths exposed to the violence of physical and sexual abuse may internalize it and deem self-violence, including suicide, an acceptable solution to their problems.

It is possible that youth who are physically or sexually abused by their parents experience emotional disengagement which in turn contributes to their meaninglessness, powerlessness, estrangement, and isolation, all of which are conducive to suicidal ideation and to suicide itself.

Parental Psychopathology. Parental psychopathology, including depression, substance abuse, antisocial behavior, and criminality, has been found to be more common

in families of suicidal youth (Brent, 1995; Grosz et al., 1995; Lester, 1993; Stokes, 1994). Although researchers concur that youth suicide attempters have more family members with psychiatric disturbances, they disagree about which parent is most often the patient. Lester reported that mothers of suicidal youth are found to experience psychopathology, but, Henry and colleagues found that higher levels of depression were found in fathers of youth suicide attempters. These contradictory findings indicate that further research is needed in this area. However, regardless of which parent is most often identified as the patient, parental psychopathology can result in poor child monitoring, family disruptions, and family discord all of which contribute to suicidal risk in youth (Brent, 1995).

History of family suicide. Lester (1993) found that suicidal youth were more likely than nonsuicidal youth to have family members who had attempted suicide. Youth suicide attempters admitted to emergency rooms have a family history of attempted suicide more often than the other patients in the emergency room.

Henry and his colleagues suggested that youth with a family history of suicide may have internalized suicidal behavior as an acceptable way to deal with stress.

Socioeconomic status. Studies regarding the impact of socioeconomic status on youth suicidal behaviors are conflicting (Henry et al., 1993; Levy et al., 1995). Henry and colleagues found that when attempters were compared with controls, youth from families experiencing high levels of economic insecurity were at a higher risk for suicidal behaviors. However, Levy and associates found in their study of young suicide attempters that higher socioeconomic status related to more serious suicidal intent. They suggested that youth from low socioeconomic families may think just as seriously about death and suicide but are not as serious in their intent to die during the actual attempt. These studies suggest that the association between socioeconomic status and youth suicide is not straightforward or predictable. It is likely that financial security does not protect youth from suicidal ideation. However, further studies are required to clarify this issue.

Parental alcohol use. Henry and associates (1993) reported that parents of suicidal youth consume more alcohol than parents of nonsuicidal youth. However, it is unclear whether this factor alone is significant, or whether the variables associated with consuming alcohol, such as family violence, increase suicidal risk.

High parental expectations. High parental expectations appear to be a risk factor for suicidal behaviors, especially in younger adolescents. Suicidal youth often report that their parents' expectations exceed what they feel they can achieve. Gifted adolescents are especially noted for exhibiting suicidal tendencies as a result of the high expectations their parents put on them (Henry et al., 1993).

Residential mobility. Recent changes in residences are associated with greater risk for adolescent suicidal behaviors. Repeated residential relocations, with the accompanying lack of long-term peer relationships, may create a sense of insecurity and instability in youths. Moreover, relocations may be the result of parental divorce and remarriage, with its accompanying difficulties for the youth (Henry et al., 1993).

Adolescents beginning their own families. Henry and colleagues (1993) found that married adolescents have higher suicide rates than single adolescents; 1.5 times greater for married adolescent males and 1.7 times greater for married female adolescents. The authors speculated that troubled youth get married to escape conflict in their families or that the stress of pregnancy before marriage and early parenting contribute to their vulnerability. The authors also noted that adolescent females who are pregnant, who have become new mothers, or have an abortion are at an increased risk for suicide; these females often feel overwhelmed by their situation and view suicide as one solution to an unbearable situation.

Availability of guns. 70% of youth suicides occur in the victims' homes, with guns used by 65% of the males and 47% of the females ("Teen Suicide," 1994). Clearly, the availability of guns facilitates suicide. By restricting the availability of guns in their homes, parents could reduce the incidence of teen suicide, especially impulsive suicide.

Physical and Sexual Abuse

Researchers have found that a significant number of suicidal youth experienced physical and sexual abuse during their younger years (Grosz et al., 1995; Henry et al., 1993; Lester, 1993). Grosz and associates found that 41% of battered children had attempted suicide, compared to neglected children (17%) and normal controls (7%). Lester found that youth suicide attempters had experienced more physical and sexual abuse than youth with suicidal ideation and non-suicidal youth. For example, a study of highschool students found suicide attempters had endured more physical beatings, rapes and sexual abuse than other students. Furthermore, runaway children, who commonly report a history of abuse, are reported to have a higher incidence of suicidal preoccupation than non-runaways.

Loss and Personal Disconnection

Loss and personal disconnection function both as chronic vulnerabilities and as potential precipitants of suicidal behavior in youth. Zimmerman (1993) suggested that the following vulnerabilities increase the risk of suicide: early object loss through parental death, divorce, or separation; deep humiliation; disturbed interpersonal relationships with peers; learning disabilities and poor academic performance; the loss of social support and; adaptational disintegration of the self. He also suggested that the relationship between physical and sexual abuse and suicide may be mediated by a loss of bodily integrity, integrity of self, and a loss of trust in others. Common precipitants, which often function in the context of long-term stressors, include school failure, fights with parents, and a break-up with a lover (Zimmerman, 1993, p. 3). Zimmerman also found that suicidal adolescent females experience less connection, more loss and distance, in their relationships. They identify fewer support persons, and are less likely to be living with their mothers or to have confiding, active, affectionate relationships with their mothers.

Heckler (1994) found that there are three kinds of losses suicidal people experience: traumatic loss, extreme family dysfunction, and alienation. He suggested that these losses

are common precursors to suicide. Although some people attempt suicide soon after a traumatic loss, the majority of suicide attempts seem to reflect losses incurred in childhood and adolescence. Lester (1993) suggested that losses occurring to youth between the ages of 6 and 14 may be especially potent factors in later suicidal behavior. As the authors suggest, later losses cause the person to re-experience the pain of earlier losses, intensifying the current pain.

Lack of Social Support

Considerable empirical research points to the conclusion that suicide risk increases for youth who lack social support and experience poor peer relationships (De Wilde, Kienhorst, Diekstra, & Wolters, 1994; Grosz et al., 1995; Shagle & Barber, 1995). De Wilde and associates found that youth at high risk for suicide report less support from siblings and relations outside the family than nonsuicidal youth. They discovered that a common predictor of adolescent suicidal behavior was problems with a girlfriend or boyfriend. However, positive religious beliefs and practices protected youth from suicidal behaviors. Shagle and Barber reported that rejection by peers or absence of friends was associated with suicidal ideation in youth, lack of friendship increases the youth's feeling of loneliness and unworthiness and causes isolation from the peer group that might otherwise serve as a source of support in times of distress. Grosz and colleagues suggest that social support protects youth against suicide by acting as a moderator between life stresses and suicide. Talking difficulties over with friends may lessen the impact of the problem for the youth.

Imitation and Contagion

Imitation, observing suicidal behavior in other individuals and imitating it, and contagion, being influenced to commit suicide because of personal ties and emotional identification with a person who committed suicide, play a role in youth suicide (Coleman, 1987; Grosz et al., 1995; Health and Welfare Canada, 1994; Silverman & Felner, 1995; Wagner, et al., 1995). Lester pointed out that young people are especially sensitive to the

suicidal behavior of others. Their decision to kill themselves or to attempt suicide can be affected by suicidal behavior in their family members, friends, acquaintances, and celebrities.

Friends and acquaintances. Suicide clusters, a sequence of suicides in close temporal and geographical proximity, among youth are increasing, especially among Aboriginal youth (Health and Welfare Canada, 1994). Wagner and associates (1995) found in their study of 1050 adolescents that suicide attempters are more likely than depressed, nonsuicidal, or suicidal youth to know someone who has committed suicide. Pfeffer (1986) reported that young people are especially vulnerable to suicide clusters because of their strong peer identifications. Learning about the suicidal behavior of a peer can act as a precipitant. Several youth may kill themselves (or try to) as a result of a friend's suicide. Silverman and Felner (1995) reported that youths who follow the first suicide have predisposing conditions such as depression or other psychiatric problems, and/or a low level of family support, and/or a high level of alienation from friends and family. These youth may see the first suicide as an alternative coping strategy that they had not previously considered. Furthermore, highly stressed youth who lack identity and acceptance may consider suicide because of the overwhelming attention and grief paid to the initial suicide. Health and Welfare Canada (1994) reported an incident where the suicide of a highschool student was followed within weeks by the suicides of two friends. Seven other students attempted suicide in the following two weeks, while 23 more students reported suicidal ideation. Researchers found that 75% of the 32 students involved in this suicide cluster had previous emotional difficulties that likely made them vulnerable to the contagion effect.

Findings regarding the contagion effect of suicide prevention programs in schools are contradictory (Grosz et al., 1995). Although some studies indicated that these programs may result in an imitation or contagion effect among students, other studies reported suicide prevention programs are beneficial. Unfortunately, most suicide prevention programs are implemented without long term evaluation. Becky Temple (personal communication, May

22, 1997), from the Canadian Mental Health Association gives suicide prevention presentations to schools that request this service. However, these presentations are not evaluated for effectiveness. Further evaluation of programs already in place would better clarify the relationship between suicide prevention programs and the contagion effect, but until this data is available there is no solid empirical basis for judgment.

Celebrities. Several studies have reported that suicides of celebrities result in an upsurge of suicides among youth (Coleman, 1987; Grosz et al., 1995; Health and Welfare Canada, 1994; Henry et al., 1993; Kienhorst, 1994; Lester, 1993; Stokes, 1994). Lester found that the suicides of movie stars Marilyn Monroe and Freddie Prinze generated in the United States an extra 220 suicides during the month of publicity. More recently, media coverage of youth suicides correlated with an increase in adolescent suicides and attempts (Henry et al., 1993; Stokes, 1994). Coleman reported that following the suicide of popular teenage singing idol Yukiko Okada in Japan, 213 youths committed suicide, 36 more than for the same period the previous year. A few years ago rock star Kurt Cobain's suicide precipitated numerous teen suicides in North America (Came, 1994; Gelman, 1994; Kienhorst, 1994). Three 18-year-old Canadian males committed suicide inspired by Kurt Cobain's suicide. A suicide note left by one read: "'When Kurt Cobain died, I died'" (Came, 1994, p.14). Dawson (1996) reported that an Alberta teenager shot himself in imitation of his idol Kurt Cobain.

Kienhorst (1994) noted that research has not yet clearly demonstrated whether exposure to suicidal models increases suicidal risk for youth. Most studies are correlational, therefore an increase in the number of suicides after (media) exposure does not demonstrate imitation. Indeed, a study exposing 116 high school students to different video-simulated conditions concluded that adolescents are not necessarily influenced by news about suicide. However, in another experiment 142 subjects acknowledged the existence of behavioral contagion after exposure to news about suicide, although they did

regard themselves as being influenced by such information. These contradictory findings blur the role of media coverage in youth suicide.

The consensus among researchers is that imitation and contagion are most likely to affect youths already at risk for suicide; for these youth exposure to the suicides of family members, friends, acquaintances, and celebrities may indeed precipitate their own suicide.

Stress

Adams, Overholser, and Spirito (1994) compared hospitalized youth suicide attempters with a control group of high school students and found that suicide attempters had experienced significantly more stress during the previous year than the control group. Their stress resulted mainly from major negative events (e.g., trouble with the law) and exit events (e.g., death of a loved one, moving to new neighborhood). Male and female suicide attempters did not differ in terms of the source of their stress. However, females in both the suicidal and control groups reported higher stress levels than males. Levels of stress were found to be related to the severity of depression and frequency of suicidal ideation among adolescent suicide attempters. Grosz and his colleagues (1995) supported these findings when they reported that specific stressors include conflict with parents, loss of a boyfriend or girlfriend, school changes, and loss of a parent due to divorce or death. Wagner and associates (1995) found in their study of 1050 junior and senior high school students that suicide attempters are typically distressed youths who resort to suicidal behavior when faced with chronic stress they cannot handle. On the other hand, Henry and colleagues (1993) reported that suicidal behavior in youth may be the result of their inability to solve problems, and adapt to stress, resulting in hopelessness and despair.

McLean and Taylor (1994, p. 82) indicated that the following stressors are precipitating events for teen suicide:

1. Being confused about goals or direction in life;
2. Being prevented from participating in rule making;
3. Being unable to express or manage anger;

4. Fighting or arguing with siblings;

5. Being labeled as messy, selfish, inconsiderate, or lazy;

6. Being teased or talked about by friends;

7. Being made to feel inadequate or treated like a baby;

8. Being humiliated or embarrassed in front of friends.

Although stress can act as a precipitant for suicidal behavior, most young people experience stress without considering suicide. Therefore, it appears that stress overburdens youth who are already at risk for suicide, consequently, it seems logical that suicidal youth must be identified and taught coping strategies for reducing stress. In addition, parents should be encouraged to support their children when they go through major life changes, and schools should identify stressed students and provide them with some support or group involvement.

School Difficulties

Suicidal youth do not perform well in school (Lester, 1993; Shagle & Barber, 1995; Thompson et al., 1994). Lester found that suicidal youth have lower grade point averages, are absent more often, drop out more often, and have more discipline problems than the general student population. Thompson and colleagues support these findings, and add that suicidal students reported more unmet school goals and greater expectations for dropping out of school than their cohorts. Shagle and Barber suggested that poor school achievement fosters a poor self-image and contributes to failure and in some instances to suicidal ideation. Gifted students also experience school difficulties and a somewhat increased suicidal risk. In addition, the dropout rate for gifted students is often higher than for students in general. As Henry and colleagues (1993) suggested, gifted students may be at a higher risk for suicide than their peers because of unrealistic expectations and unattainable aspirations.

Suicidal youth may experience difficulties in school because they are depressed and feeling hopeless, but, on the other hand, school difficulties may add to their pre-existing depression and hopelessness and their sense that life is not worth living.

Violence and Death in Rock Music

A considerable body of research suggests that heavy metal music, which contains lyrics dealing with the apocalypse, indiscriminant violence, and despair nihilism has an influence on youth suicide (Attig, 1986; Coleman, 1987; Klenk, 1985; Litman & Farberow, 1991,1994; Stack, Gundlach, & Reeves, 1994; Wass et al., 1988-89). It is assumed that rock themes which express paranoia, depression, anxiety, and despair add to the hopelessness of many youth. Attig and Coleman believe that young peoples' music reflects their culture, and Lester hypothesized that heavy metal music draws youth who have nihilistic values and attitudes because it triggers emotions which justify negative identity and self-destructive desires.

Wass and colleagues (1988-89) surveyed 694 middle and high school students and found that nine percent of the middle school students, 17 percent of the rural and 24 percent of the urban high school students preferred music with lyrics promoting homicide, satanism, and suicide. Although the musicians and recording industry contend that the music is merely entertainment and that youth do not listen to the words, their study found that most adolescents reported knowing many or all of the lyrics of their favorite songs and a large number of the adolescents often agreed with the words. The authors speculated that some teenagers are drawn to this music and these themes as a way of coping with death-related anxieties. Interestingly, Litman and Farberow (1994) found that 54% of youths in detention centers also preferred rock music with themes about homicide, Satanism, and suicide. The reasons for this seem to merit at least some speculation. Possibly incarcerated youth are drawn to this music because it reflects their predisposition to engage in acts of violence against others and themselves. On the other hand, they may listen it because it expresses their alienation, hopelessness, and despair.

Recently, judicial courts in the United States were asked to determine if heavy metal music influenced three youths to commit suicide. In the Ozzy Osbourne lawsuit the youth's parents charged that the singer's "violent, morbid and inflammatory music" encouraged their son to take his own life (Scobie, 1986, p. 12). The judge dismissed the suit saying, "'although the music 'may be objectionable and repulsive' to many, the . . . attorney failed to show why Ozzy's songs should be exempt from First Amendment protection'" (Coleman, 1987, p. 105). The British rock group Judas Priest and CBS Records, Inc., were also ordered to stand trial in a civil lawsuit that charged them with inducing two Reno, Nevada, youths to shoot themselves. The families contended that the precipitating factor in the suicide of their boys was listening to the despairing, nihilistic music of Judas Priest and responding to alleged subliminal messages imbedded in the music. Once again, the judge ruled that although the heavy metal music might have a toxic influence, the sounds and words are protected by the free speech first amendment. He added that the influence of subliminal messages on behavior is unproved and that other elements in the personalities of the victims accounted for their self-destructive behavior (Coleman, 1987; Henry, 1990; Litman & Farberow, 1991,1994). The judge's decision has merit because lyrics are constitutionally protected and suicide is caused by multiple underlying factors rather than one precipitating factor, but on the other hand, music directed specifically toward youth should be held to higher standards of responsibility and the judge failed to address this issue.

Litman and Farberow (1994), who have studied rock music as a risk factor for suicide, documented the two court cases and concluded that heavy metal music does not contribute to youth suicide for the majority of youth and cannot be considered a cause, at least for them. However, for a minority of disturbed and alienated youth preoccupation with this music may indeed prove to be a risk factor for suicide because it encourages escapist fantasies and aggressive, destructive, and nihilistic obsessions. Heavy metal music

becomes part of their subculture and part of their world view, a view in which suicide can represent freedom and liberation from life's pain.

In what is likely the first systematic, large-scale analysis of the problem, Stack and associates (1994) correlated heavy metal magazine subscriptions with youth suicide (15 to 24 year-olds) and found that the greater the strength of the metal subculture, the higher the youth suicide rates. The researchers concluded that heavy metal music nurtures suicidal tendencies already present in the subculture that listens to it. Thus, although the lyrics themselves are not an immediate cause of suicidal behavior, they fall on the ears of listeners already at risk for suicide.

Incarceration

Incarcerated youth have been found to be at an increased risk for suicide (Henry et al., 1993; Lester, 1993). Youth suicide rates in adult jails and detention centers exceed those of youth in the general population. Furthermore, youth suicide rates are higher in adult jails than in juvenile detention centers. Suicide attempts by 13- to 15-year-old incarcerated youth were found to be correlated with parental conflict, depression, and childhood hyperactivity. Delinquent females attempt suicide two and one-half times more often than delinquent males, but in keeping with the gender trend, their incidence of death from suicide attempts is not as high as it is for males.

Firearms

The availability of firearms increases suicidal risk for youth. In Canada about 45% of male youths and 18% of female youths who commit suicide do so with firearms. Many suicides involving firearms appear to have been committed impulsively by youths who had recently experienced distressing situations. Had guns not been available these youths may have had time to rethink their options and may have lived (Health and Welfare Canada, 1994; Leonard 1994). The following recommendations put forward by Leonard could reduce firearm suicides in Canada: public education regarding the risks of keeping firearms in the home; improved legislation to decrease the availability of firearms in the homes and

environments of young people; and modification of firearms and ammunition, that would make it impossible for small children to fire them, indicate whether the firearm is loaded, and less deadly ammunition.

Precipitating Events

Stokes (1994) found that most youth suicides are preceded by a crisis in which the young person experienced rejection or humiliation. This may include disputes with parents or peers, the breakup of a relationship, or failure at school. Health and Welfare Canada (1994) reported that between 27 and 39 percent of people who completed suicide had experienced a stressful life event within the six weeks preceding their suicide attempt. A study involving Montreal students found that suicide attempts and suicidal ideation were preceded by the following events: running away from home, dropping out of school, "bad trips," rejection from social group, being physically attacked, broken love relationships, broken friendships, and moving to a new home. Additional precipitants for suicidal girls included abortions, pregnancies, or fear of pregnancy.

Litman and Farberow (1994) believe that the relative importance of precipitating events in suicide is exaggerated. Their own study of youth suicide found that a precipitating event occurred in only about one half of the deaths. But in addition to the precipitating event, they found a history of chronic dissatisfaction, unhappiness, or depression, with nothing special happening in the last day or two except that the feelings of frustration, pain, and exhaustion were increasing.

Precipitating events are found in most suicide attempts, however they do not appear to be the cause of the suicide attempt, rather they serve to convince youth that there is no hope and that suicide is their best recourse (Heckler, 1994).

Summary And Discussion Of Risk Factors

Although many risk factors increase the likelihood of suicidal behavior seldom is suicide caused by one agent or factor. Instead, multiple biological, psychological, and social/environmental risk factors are at work in suicidal ideation.

However, particular combinations of risk factors are commonly found among suicidal youth. Litman and Farberow (1994) reported that depression, substance abuse and conduct disorder are highly correlated with youth suicide. Shagle and Barber (1995) found that a combination of poor peer and family interactions strongly influences suicidal ideation in youth. Wagner and associates (1995) noted that stresses related to parents, lack of adult supports outside of the home, difficulties with law enforcement, physical abuse by a parent, living apart from both parents, and knowing someone who had completed suicide were commonly associated with suicide attempters. Lester (1993) found that suicidal adolescents tend to have experienced physical or sexual abuse, the loss of parents during childhood, disturbed family relationships, and parental psychopathology. In addition, these youth tend to be emotionally disturbed and have low self-esteem. McLean and Taylor (1994) found that hopelessness and depression, substance abuse, personality disorder, previous suicidal behavior, and poor coping skills were major risk factors for youth suicide. And Pfeffer (1986) reported that familial suicide, parental absence, parental psychopathology, parental abuse, previous suicidal behavior by the youth, drug and alcohol abuse, and antisocial behaviors were common risk factors found among suicide victims.

Clearly, there is no universal set of risk factors in every youth suicide, therefore, each suicide must be considered within the context of the youth and his or her environment. My personal experiences with suicidal youth incline me to think that depression and hopelessness, and family dysfunction play the most significant roles in youth suicide. It is possible that the psychological disorders experienced by some youths are symptoms of family dysfunction. As Lester (1993) noted, the impact of negative childhood experiences increases the risk of psychiatric disturbance, especially depressive disorders, which in turn increases the risk of suicide. Therefore suicide prevention must include a family intervention component.

It is my opinion that the effects of heavy metal music on youth suicide are underestimated. Educators, parents, and advertisers have long been aware of the powerful effects of music. Although I concur with researchers who claim that heavy metal music is not a risk factor for normal, non-suicidal youth, it concerns me that youth with suicidal propensities have easy access to music which nourishes their predisposition to suicide.

Regardless of which factors figure most prominently in an individual suicide, most attempts share two characteristics: early pain that has gone unresolved and is compounded by current adversity and the absence of psychological and emotional support after a trauma. Therefore, the next chapter focuses on prevention, intervention, and postvention in youth suicide.

CHAPTER IV

Prevention, Intervention, and Postvention in Youth Suicide

This chapter reviews the theory and practice of suicide prevention, intervention, and postvention. To clarify the terms suicide prevention, intervention, and postvention, I provide the following definitions:

> *Suicide prevention* includes any self-injury prevention or health promotion strategy generally or specifically aimed at reducing the incidence and prevalence of suicidal behaviors (i.e., reducing risk). *Suicide intervention* includes early recognition and assessment of risk, immediate response, resource referrals, and follow-up management and treatment of individuals at risk of suicide. And *suicide postvention* refers to the general care and support or special treatment needed by survivors of a suicide. (Health and Welfare Canada, 1994, p. 57)

Prevention

Prevention is designed to counter the increase in youth suicide. As our review of risk factors indicates, a total program of prevention must encompass the individual, the family, and society. This thesis will focus on the role of suicide prevention in the educational setting. Since most youth attend school, the educational system is in a unique position to provide suicide prevention programs. However, some researchers have cautioned against discussing suicide prevention in the classrooms (Diekstra, 1989; Shaffer et al., 1990). Their concern is that these programs might harm some students, especially students already at high risk for suicide. Diekstra noted that classroom-based suicide prevention programs might provide models for suicidal behavior. Shaffer and colleagues stated that these programs must be evaluated to determine their safety. Their own evaluation of three suicide-prevention curricula found that suicide attempters were more likely to exhibit a negative reaction to the programs.

On the other hand, many researchers advocate suicide prevention in the educational setting (Kalafat & Elias, 1994, 1995; Klan, 1991; "Teen Suicide," 1994; Thompson et al.,

1994). McEvoy and McEvoy (1994) found that students exposed to the suicide curriculum are not influenced to attempt suicide. Rather, by identifying suicidal students schools are able to decrease youth suicide. According to "Teen Suicide," a professionally designed prevention curriculum enables students to grasp an alternative. Kalafat and Elias pointed out that responsibility of school systems to identify suicidal students and respond appropriately is included in education statutes and codes. Klan (1991, p. 27) provided the following reasons for including suicide prevention in schools:

1. Surveys indicate that friends are most frequently contacted by adolescents contemplating suicide. Therefore, teenagers need to recognize potential danger to themselves and their friends and be educated to respond appropriately.
2. Most adolescents know of someone who has attempted or completed suicide; they want and need information on this topic.
3. Talking about suicide and learning ways to get help for oneself and one's friends can reduce suicide. Exposure to the topic does not induce suicidal behavior, in deed, not talking about suicide makes it almost impossible to prevent.
4. Self destructive behavior is a type of problem-solving. We can teach children other ways to solve their problems, to generate options, and to cope with negative feelings.
5. If schools are interested in the whole child, then teaching life skills, decision-making, personal safety, family life, career development, home-making and stress management should be part of every student's education.

McEvoy and McEvoy (1994, p.3) found that 60% of American youth respondents (ages 13-to-19) in a comprehensive national survey knew another teenager who either attempted suicide and failed (45%), or who succeeded (15%) in taking his or her own life. In over a third of these cases the suicide attempter was a close friend or a relative. Moreover, 62% of the students believed that some or most teenagers had thoughts of committing suicide; 15% of the students sampled reported that they had come close to committing suicide, and 6% reported that they had attempted suicide. White (1993, p. 5)

surveyed 1,086 Alberta students in grades 8 through 12 and found that most students reported having some familiarity with suicidal behavior on the part of an acquaintance. Over half of the students reported knowing someone who had attempted suicide, and just under 40% knew people who had committed suicide. Girls were more likely than boys to be familiar with suicide attempters; 67% of the girls and 53% of the boys reported knowing an attempter. Similarly, more girls than boys knew someone who died by suicide; 13% reported attempting suicide themselves.

Most students who experience difficulties are helped by their families, friends, and churches; however, some students lack adequate support systems and succumb to suicidal ideation. With proper training teachers, counselors, administrators, and other school staff could help these young people. Unfortunately, most educators have not received training in suicide prevention. In undergraduate seminars that I was leading education students reported that they felt completely unequipped to deal with suicidal students in their classrooms. For most of these future teachers my brief seminar on suicide presentation was the only exposure to youth suicide they had received in their university education.

School-Based Suicide Prevention Programs in Canada

Suicide awareness programs range from brief presentations for faculty or students to comprehensive systemic programs involving students, faculty, administrators, parents, and community service providers. Unfortunately, most programs are not evaluated after being implemented. Berman (1994) found that the typical school-based suicide prevention effort in Canada tends to be a one-time effort that involves a classroom-centered (curriculum-based) set of lectures and discussion, often supplemented with exercises and role playing to teach problem-solving skills or crisis management. These efforts typically occur in six hours or less, and rarely involve further education or retraining in subsequent years. Berman believes that these programs do not meet their objectives because attitudes and behavior do not change with so little effort. However, Allen (1994) pointed out that it is impossible to determine the impact of suicide prevention programs because only a few

have been systematically evaluated. Thompson and colleagues (1994) believe that all prevention programs must be evaluated. Kalafat and Elias (1994) agree that school-based suicide awareness programs must be regularly evaluated and modified to ensure their effectiveness. Their evaluation of a comprehensive school-based suicide awareness program found that students who participated in the classes showed significant gains in knowledge about suicidal peers and significantly more positive attitudes toward help seeking and intervening with troubled peers.

Evaluation is an essential component of suicide prevention. By evaluating school-based suicide prevention programs we can determine their effectiveness and modify them where necessary.

School-Based Suicide Prevention Programs in Alberta.

In Alberta suicide prevention is left to the discretion of individual schools and many have not developed policies to guide their efforts in suicide prevention and intervention programming. Gina Vivone-Vernon, assistant director of curriculum services for Alberta Education, in a personal communication stated that the health program at the junior high school level and the Career and Life Management (CALM) course at the high school level "mention the topic of suicide." According to Vivone-Vernon, these programs provide teachers with "openings and opportunities to address the topic of suicide." However, addressing suicide is not mandatory and is left to the diseretion of individual teachers. Elaine Ford (personal communication, June 26, 1997), Health Career and Life Management Consultant with the Edmonton Public Schools, concurred with Vivone-Vernon and added that the amount of time spent on suicide prevention depends on the school and its needs. Furthermore, once the curriculum is implemented it is not evaluated. She noted that teachers can get their information out of textbooks or invite speakers to give suicide prevention presentations. Becky Temple (May 22, 1997), and two part-time presenters from the Edmonton branch of the Canadian Mental Health Association, provide suicide prevention presentations of 50 to 80 minutes to schools which request their

services. However, Ms. Temple indicated that they do not conduct follow-up analyses or evaluations. Although the Canadian Mental Health Association advertises this free service to all the schools in Edmonton once a year Ms. Temple estimated that less than half of the schools in Edmonton request their services. Charlotte Ruppel (personal communication, June 26, 1997), Guidance and Counseling Consultant with the Edmonton Public Schools, reported that many schools have peer support programs where students are coached on how to handle potentially suicidal students and to refer them to the school counselor. Each school evaluates the peer support program and determines its ongoing existence. Marcus Busch (personal communication, June 26, 1997), a social work consultant with Edmonton Public Schools, indicated that very little suicide prevention is mandated in the district. He reported that although one or two staff are delegated by schools to attend an inservice on suicide intervention twice a year, generally only nine or ten people attend. (It once was canceled because of inadequate attendance.) Busch noted that when a suicide occurs there is great openness to the development and implementation of prevention measures and programming, but as time passes the interest fades. Because individual schools are required to pay their fees, social work consultants are rarely invited into schools to give suicide presentations to students or staff.

Alberta Education does not view suicide prevention as a priority, and few schools in Alberta have implemented suicide prevention programs. A case can be made however that the prevalence of youth suicide warrants a comprehensive suicide prevention program as part of the curriculum. Furthermore, these programs should be continuously evaluated and modified to ensure their effectiveness. School staff should also be required to attend inservice training on suicide intervention where they can be trained to recognize risk factors associated with youth suicide and taught how to work with students exhibiting suicidal behaviors. The students' right to receive some protection from their own self-destructive impulses should be a priority for all educators.

Human Resources in School-Based Suicide Prevention Programs

Virtually all researchers agree that effective school-based suicide prevention programs must involve school staff, students, parents, and community resources. McEvoy and McEvoy (1994, p. 51) suggested that teachers and other school personnel are more able to recognize suicide warning signs than parents who deny the seriousness of their child's crisis. Moreover, teachers who have had experience working with "average" students can often sense when one of them is in serious trouble. Because teachers spend so much time with students they are in an excellent position to recognize dysfunctional behavioral changes and other signs indicative of a crisis. However, as "Teen Suicide" (1994) pointed out, no staff member should carry the complete burden of prevention, rather, all school staff should work together as part of a support network. The entire staff should be aware of the proper procedures in suicide prevention. After observing unusual behavior and recognizing warning signs, school staff should follow an established policy; parents should be notified and the student referred for treatment. It should be noted that schools without trained school staff incur the risk of being sued by parents should a suicide occur (McEvoy & McEvoy, 1994).

Since the research indicates that suicidal youth would first turn to a friend to discuss their suicidal thoughts, schools must equip students with facts about suicide to enable them to deal with this issue. Veire (1992) recommends that schools teach students when they are approached by suicidal youth to listen and hear what their suicidal peer is saying, respond honestly about their concern and their need to not keep this information secret, share their own feelings with the suicidal youth, and get help.

Educating parents in suicide prevention and keeping them apprised of the school's efforts also helps to lessen the problem. McEvoy & McEvoy (1994, p. 57) suggest that schools involve parents in suicide prevention by mailing an information package that outlines the school's program and includes the following suicide prevention information: information that dispels misperceptions about student suicide, information on how to

identify potential suicidal risk in their children, information about helpful ways to respond if they think their child needs help, and information that identifies school and community helping resources. In addition, schools should provide a yearly suicide prevention education workshop for parents and interested members of the community.

Establishing links with community caregivers provides suicidal students with additional support systems and the specialized care they require. However, schools must first ensure that help is available when students approach these various community caregivers. Sending a suicidal youth to the hospital emergency room where he/she is treated with indifference, or sent home without receiving help can exacerbate the suicidal state. As a suicide crisis worker I provide callers with a list of community resources, however, some callers have informed me that getting genuine help from these agencies is frustrating. Designated school staff should initiate linkages with the appropriate community caregivers to ensure that students receive the help they require.

Prevention Targeting High-Risk Suicidal Youth

Various researchers have suggested that suicide prevention efforts should focus on youth at elevated risk for suicide (Diekstra, 1989; Eggert, Thompson, Herting, & Nicholas, 1995; Grosz et al., 1995; Health and Welfare Canada, 1994; Kalafat & Elias, 1995; Shaffer et al., 1990; Thompson et al., 1994). Grosz and colleagues believe that suicide prevention programs should target at-risk youth because they are at higher risk for completed suicide, they can be easily identified (through verbalizations or attempts), directing preventative efforts at suicidal youth eliminates introducing the idea to nonsuicidal youth, and it conserves limited staff resources. Eggert et al. found that targeting a high-risk population for prevention is an effective way for schools to reduce suicide potential and promote healthy adolescent behaviors among identified youth. Thompson and associates found that suicidal youth, when compared to their peers, are more likely to become school dropouts. Suicidal youth also report more depression, stress, higher consumption of

cigarettes, alcohol, marijuana, and hard drugs, and more family stress than non-suicidal youth.

Suicide Prevention Programs with a Broad Focus

Some researchers advance the viewpoint that school-based suicide prevention programs could benefit *all* students (Kalafat & Elias, 1995; McEvoy & McEvoy, 1994; Silverman & Felner, 1995). In contrast to programs with a narrow focus that specifically target suicidal students, programs with a broad focus target students experiencing school failures, depression, stress, and a range of associated health problems that correlate with suicide ideation. McEvoy and McEvoy believe that these programs are cost efficient and prevent some students from becoming suicidal.

Narrow and Broad Foci in School-Based Suicide Prevention

A comprehensive school-based prevention program that addresses suicidal behavior in the educational context may include both a broad and narrow focus. The goals of the narrow focus would be to ensure that persons coming into contact with potentially suicidal youth can more readily identify them, know how to respond to them, know how to obtain help for them rapidly, and are consistently inclined to take such action. It would also ensure that troubled adolescents are aware of and have access to helping resources (Kalafat & Elias, 1995). The goal of the broad focus is to reduce suicide risk among students by instilling in them feelings of hope and teaching them coping skills. This involves teaching students the knowledge and skills they require to build a community of support, avoid social isolation, develop healthy self-images, and resolve personal crises (McEvoy & McEvoy, 1994).

Narrow focus. An example of a school-based suicide prevention program with a narrow focus was proposed by Kalafat and Elias (1995), and includes the following components: administrative policies and procedures for responding to at-risk students, faculty/staff education, student curriculum, and community connections. Each component is evaluated for effectiveness and to encourage necessary modifications.

First, schools implement administrative policies and procedures for responding to at-risk students. Faculty and staff are informed of the administrative policies and procedures for responding to at-risk students, attempts, completions, and students returning to school after attempts. Schools may also choose to include the development and training of school-based crisis response teams that can respond to a variety of crises. Evaluation entails having faculty and staff evaluate policies and procedures and respond to vignettes (Kalafat & Elias, 1995, p.127-129).

Second, all adults in the school system, including administration, faculty, staff, and parents receive training in suicide prevention that includes suicide statistics, an explanation of the need for training, suicide myths, warning signs, initial responses and referrals, and resources. The expectation is that faculty and staff will accept their role in identification and referral. Persons who will act upon suicide referrals should also be designated at this time and receive additional training ("Teen Suicide", 1994). Evaluation includes staff and faculty evaluations of the training, responses to vignettes and questionnaires, and monitoring of staff performance by examining referral records and follow-up questions regarding responses to at-risk students (Kalafat & Elias, 1995, p.127-129).

Third, all students receive classroom instruction on warning signs, initial responses and referrals, with an emphasis on the consequences of not acting. The goals are for students to recognize the threat of suicidal thoughts and behavior and take troubled peers seriously; demonstrate positive attitudes about intervention and help seeking; know relevant facts about suicide, including warning signs; know how to respond to troubled peers; and know at least one adult that they can turn to for help. Evaluation includes student evaluations of the classes, questionnaires assessing students' knowledge, attitudes, and skills, written responses of vignettes, and examination of referral records and follow-up questionnaires regarding responses to suicidal peers. In addition, youth suicide rates in the area one year prior to program implementation can be compared with rates two years after

program implementation to determine the effectiveness of the program (Kalafat & Elias, 1995, p.127-129).

The final component ensures linkages between the school and community caregivers to provide coordinated responses to these situations. School personnel designated to respond to at-risk referrals, attempts, completions, and returns after hospitalizations should be able to identify appropriate community referral sources. Evaluation would entail having the appropriate staff fill out questionnaires and tracking their referrals and assessing them for appropriateness (Kalafat & Elias, 1995, p.127-129).

School-based suicide prevention with a narrow focus should also include comprehensive intervention programs designed for high-risk groups with a focus on underlying causes rather than specific suicidal behaviors. As Grosz et al. (1995) indicated, the presence of social support and individual adaptive skills are protective factors that keep youth from engaging in suicidal behaviors. Therefore, to counter the loneliness and alienation many suicidal youth experience schools could develop social support networks. To address the underlying issues that have led suicidal students to consider self-destructive behavior, school could facilitate the development of specific support groups. Life skills training, such as learning to make decisions, problem-solving, and communication/negotiation, could provide these youth with adaptive skills. Finally, by involving parents in all aspects of these programs schools can enlist their support and help ensure that the gains suicidal students make translate into their home environment (Thompson et al., 1994).

Broad focus. Researchers have suggested various ways schools can implement prevention programs with a broad focus. Kalafat and Elias (1995, p. 130) believe that since the suicidal process is characterized by social isolation, alienation, withdrawal, and low social supports, schools should develop programs aimed at creating a sense of community. They suggest the following strategies:

1. Provide students opportunities for increased decision making about rules, skills to make such contributions, and praise and recognition for their contributions.

2. Reorganize schools to provide students with enhanced interactions with teachers, and organize large schools as schools-within-schools to reduce "overmanning" and limit niches that can lead to alienation, limited participation, and a lesser sense of responsibility on the part of students.

3. Increase involvement and reduce alienation by promoting peer involvement in buddy/tutoring programs.

4. Increase students' social competence and decrease deviance by combining the teaching of social skills in a classroom-based curriculum with organizational modifications that permit specific and regular opportunities to use those skills, along with activities that foster positive bonding among students and with the school.

5. Employ peer models to provide social support as a buffer against stress.

Silverman and Felner (1995) noted that the successful implementation of these programs not only reduces the incidence of suicide and suicide attempts, but also addresses other social, behavioral, and health problems confronting the target community. To determine the prevailing risk and protective factors that the target population is exposed to, it is essential to first analyze the conditions in the community and other primary settings (e.g., the schools, peer groups, family, and worksites) in which the target population is functioning. The immediate program objectives are to reduce the number of antecedent conditions of risk, reduce the acquisition of vulnerabilities, and increase the protective factors. Evaluation would include determining the degree to which levels of risk have been reduced and protective factors increased, determining the degree to which the incidence and prevalence of vulnerabilities and competencies in the population had changed, and determining the differential rates of the occurrence of adaptive difficulties between those receiving the prevention and nonparticipating comparison groups.

Some scholars recommend that schools develop a prevention model that begins in the elementary school years if they are serious about reducing self-destructive behaviors among students. Leenaars (1993) noted that primary prevention can help children develop traits, habits, and skills that make them less likely to become suicidal. McEvoy and McEvoy (1994, p. 184) indicate that the three elements of primary prevention include: (1) fostering in students the basic skills and intellectual competencies necessary for school achievement, (2) fostering in students a value system which connects them to others (a social bond), and (3) presenting students with information about human problems (i.e., physical & sexual abuse, alcoholism, drug abuse, divorce, interpersonal violence, mental disorders, family conflicts, single parenthood). To achieve the objectives of the primary prevention model educators must help students develop knowledge, attitudes, and skills which will reduce vulnerabilities and promote competencies. Educators must also modify the environment in which students function to increase their chances of positive, adaptive behaviors.

Various researchers have suggested that schools can enable students to deal with stress by helping them develop resilience (Hafen, Karren, Frandsen, & Smith, 1996; Mangham, McGrath, Graham, & Stewart, 1994). Resilience describes the individual's ability to manage or cope with adversity in ways that are effective and increase the ability to respond to future adversity. Resilience means recognizing that you are ultimately the one responsible for what happens to you.

Numerous programs already address resiliency without explicitly using the term, particularly in health programs designed to foster life skills. These programs emphasize problem solving and stress management, however, few school programs are specifically designed to foster resiliency. One such program--Project Competence--developed by researchers in the United States, enhances the social competence of school age children. The Lifeskills Training program which traditionally focused on generic life skills is being

revised for high risk youth based on the data derived from resiliency research (Mangham, et al., 1994).

Research suggests that schools with supportive environments, high standards, and opportunities for significant student responsibilities and decision making produce more resilient students. The use of peer tutors can also promote mutual aid and build supportive environments for adolescents in schools. British Columbia's School-Based Prevention Project has been developed to address school climate issues. And the CanDo program in Alberta tries to build children's self confidence and sense of personal competency through successful mastery of challenges (Mangham, et al., 1994).

Peer Support Programs

McEvoy and McEvoy (1994) found that 77% of the students in a national survey reported that if they were contemplating suicide they would first turn to a friend. Many Canadian schools have taken advantage of existing peer interaction to implement formal peer support programs where students are recruited, trained to be more effective helpers who know their limitations in helping, and identified as peer helpers so that students in crises can turn to them for help.

In one Winnipeg high school staff and students developed a program named "Students Against Suicide" (SAS) to identify and help suicidal teens. The program's objectives are to:

1. Dispel myths surrounding suicide.
2. Provide helpful information to adolescents and teach them about depression and suicide.
3. Inform people that suicide is preventable, not inevitable.
4. Make the school population aware of the seriousness of a suicide threat.
5. Improve participants' helping and coping skills.
6. Encourage students to examine alternatives for dealing with stress and depression.
7. Equip students with skills for dealing with troubled peers.

8. Provide participants with information on resources in the school/community and how to access resources when in need of assistance.

9. Enable students to practice helping distressed peers in a safe environment (Klan, 1991).

Recognizing that many young people have concerns and fears about approaching adults for help, Red Deer Suicide Prevention Services has developed a training program to teach adults and youth to work collaboratively on youth suicide. Peer support team members and adults who are knowledgeable about suicide participate jointly in training. During training some of the attitudes and communication barriers that inhibit youth from seeking help from adults are examined via communication and sensitivity exercises, role plays and role reversal techniques. Trainees are taught to be aware, sensitive, and supportive to those in crisis and to assist them in accessing the professionally trained help they require (Flexhaug, 1992).

Peer support programs can be a valuable adjunct to school-based suicide prevention programs, and it is generally accepted by professionals in the field that by training young people to be effective helpers to suicidal youth schools can reduce teen suicide.

To conclude this section on suicide prevention, I have included some facts and fables of suicide.

Common Facts and Fables of Suicide

Fable: People who talk about suicide don't commit suicide.

Fact: Of every 10 persons who kill themselves, 8 have given definite advance warnings of their suicidal intentions.

Fable: Suicide usually happens without warning.

Fact: Many studies have revealed that most suicidal people give many clues and warnings regarding their intentions.

Fable: Suicidal people fully intend to die.

Fact: Most suicidal people are undecided about whether they want to live or die. Sometimes when they attempt suicide they are "gambling with death," and leave it to others to save them.

Fable: Once a person is suicidal, he is suicidal forever.

Fact: Individuals who wish to kill themselves are suicidal only for a limited period of time; it is almost always a temporary state.

Fable: Improvement after a suicidal crisis has occurred means that the suicidal risk is over.

Fact: Most suicides occur within 3 months of the "improvement," when the individual has the energy to put his morbid thoughts and feelings into effect.

Fable: Suicide is inherited.

Fact: Suicide does not usually run in families, but it may be a learned behavior, particularly from parents.

Fable: Suicidal individuals are mentally ill and suicide is the act of a psychotic person.

Fact: Studies of hundreds of suicide notes indicate that although the suicidal person is extremely unhappy, he is by no means necessarily mentally ill (taken from Leenaars, 1993, p. 115).

These facts and fables underscore the importance of suicide education. By challenging the fables of suicide with facts we can remove some of the misunderstanding surrounding it. Armed with facts and knowledge school staff, students, parents and community caregivers are in a better position to help suicidal youth.

Warning Signs of Suicidal Intentions

Many suicidal youth give warning signs of their suicidal intentions. McLean and Taylor (1994) examined the coroner's files on 250 cases of youth suicide in British Columbia and found that in more than 80% of the cases there was at least one precipitating event that could have been noticeable to family and friends. And Kienhorst (1994) reported that postmortems revealed that almost 90 percent of the suicides left clear clues, such as giving away possessions.

Leenaars (1993, p. 124) provided the following seven clues that point to a potential suicide:

1. Previous Attempts. A previous attempt is a good clue to the possibility of future attempts, especially if no assistance is obtained after the first attempt. "Teen Suicide" (1994) reported that 80% of youth who succeed in committing suicide made at least one prior attempt.

2. Verbal Statements. Suicidal threats are often seen as attempts to get attention, an attitude which results in ignoring the behavior of a person who is potentially suicidal. All threats must be taken seriously--questioning a person about possible suicidal behavior does not increase the chance that he/she will commit suicide.

3. Cognitive Clues. Suicidal people often experience cognitive constriction, or tunnel vision; as a result their range of perception, opinions, and options is limited.

4. Emotional Clues. Suicidal youth are often anxious, agitated, and depressed. A loss of appetite, sleeplessness, or unusual bouts of crying may indicate severe distress ("Teen Suicide", 1994).

5. Sudden Behavioral Changes. Changes in behavior are modest predictors of suicide. The outgoing individual who suddenly becomes withdrawn or isolated, and the normally reserved individual who suddenly becomes outgoing and thrill-seeking may be at risk for suicide. Such changes are of particular concern when a precipitating painful event has also occurred. Making final arrangements (i.e., giving away a record collection or a favorite watch) may be ominous and should be recognized as a possible warning sign to parents. A sudden preoccupation with death may also be a clue.

6. Life-Threatening Behavior: Suicidal youth often engage in self-destructive behaviors (i.e., alcoholism, drug addiction, mismanagement of physical disease, and auto accidents).

7. Suicide Notes. Writings that suggest suicidal ideation (as opposed to final suicide notes) are important clues, but, unfortunately, they are often ignored by the reader. Art work, diaries, music, and other personal documents sometimes provide expressive clues.

Although not all young people leave notes the majority do. When a pattern of clues emerges, and it is linked to feelings of hopelessness coupled with depression, guilt, anger, or estrangement, suicide is a clear possibility and intervention is warranted.

Intervention

To provide some answers to the question of intervention this section examines three topics: what to do when confronted by suicidal behavior, suicide assessment, and crisis intervention.

What To Do When Confronted by Suicidal Behavior

The best thing to do when confronted by suicidal behavior is to discuss it openly, show concern, interest and support, and consult with a trained professional. Leenaars (1993, p.129-131) provided the following suggestions for confronting suicidal behavior in youth:

1. Accept the possibility that the youth may be in danger. Take it seriously.
2. Check it out. Consult with another adult to see if they share your opinion. Teachers may be a good source of information. Ask the youth directly if he/she is thinking of killing himself/herself and tell the youth about the clues you have noticed. Suicidal people are often relieved to find someone willing to talk. Do not be afraid that you are putting the thought in the youth's mind.
3. Do not panic. Panic increases the youth's perturbation and may jeopardize your own ability to act.
4. Listen. Take the time to listen to the young person. Encourage him/her to verbalize feelings and thoughts. Accept what he/she says without judgment.

Do not make false promises that things will get better immediately. Do not allow yourself to be sworn to secrecy.

5. Show that you care. Make it clear that you understand and are really concerned. Let the youth know that you care and want to help. Make yourself available.

6. Get help. Suggest professional help and go with the youth for assistance. If he or she refuses help, you should initiate it yourself. Contact a professional. Meanwhile, if the risk of suicide is high, do not leave the suicidal youth alone. Take the youth with you along to a source of help or call a crisis center to assist you with what to do. If the suicidal act is in progress call the ambulance and police immediately.

When a student in school is identified as being potentially suicidal trained staff should assess the severity of risk to determine appropriate intervention (Pagliaro, 1995). During the assessment it should be determined if the youth exhibits any of the risk factors discussed in Chapter 3. Corey (1996) suggests asking direct questions about the suicide threat: "Are you thinking about killing yourself?" "Have your tried previously to kill yourself?" "Do you have a plan?" "Do you have the means to kill yourself?" "Will you make a contract not to kill yourself accidentally or on purpose?" (p. 63-64) If suicide risk is determined to be severe, appropriate social service agencies should be contacted and/or the student should be taken to a hospital for a psychiatric assessment. Parents or legal guardians must always be promptly contacted and informed of the student's crisis and of the actions taken. School staff should never act alone in working with students assessed to be at high risk of suicide. Collaboration with mental health professionals is essential.

Suicide Assessment

The first priority in suicide intervention is to ensure the physical safety of the suicidal youth. This includes removing lethal means of self-destruction, carefully monitoring the youth's behavior, and ensuring the youth is in a safe environment. Next the therapist or professional must establish a working alliance with the suicidal youth. In a

non-judgmental manner, the therapist must stress the seriousness of the situation and convey a genuine interest and a desire to help (Stokes, 1994). Then a careful and comprehensive assessment must take place to determine the level of suicide risk and the appropriate clinical interventions.

Various psychometric instruments have been developed to assist therapists in assessing the severity and duration of associated symptoms of depression, hopelessness, suicidal ideation, and self-esteem (e.g., The Scale for Suicidal Ideation, Multi-Attitude Suicide Tendency Scale, Beck Depression Inventory, Child Depression Inventory, The Center for Epidemiological Studies Depression Scale). However, these instruments alone cannot provide adequate information regarding risk levels or the effectiveness of interventions. A clinical interview is essential to clarify the precipitating stress as well as the underlying causes of the suicidal behavior, and determine appropriate interventions (Pagliaro, 1995; Rittner et al., 1995).

To determine the client's risk for suicide the clinician must gather information on personal factors, exterior factors, and mental state phenomena. *Personal factors* include the risk factors commonly associated with suicide (i.e., gender, race, age, psychopathology, access to lethal means, previous suicidal history, recent and significant losses, and a history of physical, sexual, and emotional abuse). *Exterior factors* include a range of external, environmental phenomena that affect the person in both immediate and long-term ways (e.g., the cultural acceptance of guns, adolescent peer pressure, effects of family conflict and psychopathology). And the *mental state examination* includes details related to the youth's mental state (i.e., a suicide plan or death fantasy, constriction and disorders of thought, self-hate, aloneness, murderous hate, hopelessness, intellectual functioning, and the patient's attitude toward the clinician) (Jobes, 1995). As Catenaccio (1995) noted, a reliable history in conjunction with a mental status examination provides a good store of information about the patient's specific strengths and weaknesses. Examining the association of personal, exterior, and mental state variables in relation to the client's long-

term strengths and weaknesses can help the therapist determine the client's relative risk for suicide.

Stokes (1994, p. 54-55) suggests the therapist query the client regarding the circumstances surrounding the suicidal act (i.e., changes in family, loss of friendships at school, legal difficulties). He recommends the following questions:

1. What was the degree of lethality of the suicide attempt? What method did the patient use? What was the intention? How premeditated was the act? Had the patient performed any "last acts" (e.g., giving away favorite possessions, saying good-bye)? Was the action planned or impulsive? What was the expectation and what was the likelihood of success? What precautions were taken against discovery? Did the patient seek help? Was a note left? Generally, the more the plans have been thought out the higher the suicide risk (Kienhorst, 1995).
2. What was the patient's motivation? Did the patient intend to commit suicide? Is the patient depressed or hopeless? Is the patient angry and wishing to punish someone?
3. What is the patient's concept of death? Is the patient hoping to be reunited with someone who has died? Does the patient fantasize about observing his/her own obsequies?
4. What is the patient's current attitude to survival? Is he/she glad to be alive? Does he/she plan to try again and by what means?

Henry and associates (1993, p. 304) indicated that the following issues should be addressed during assessment: the events that preceded the attempt, the extent of suicidal intent and reasons for the act, current stresses, current or previous psychiatric disorders or suicidal tendencies, family and personal history, coping resources and supports, the risk of further attempts, and attitudes of the individual and family members toward intervention.

In addition to interviewing the suicidal youth, the therapist must also interview the family to determine their understanding of the youth's actions, as well as their attitude towards the suicide attempt. The therapist must also ascertain whether the parents are able

to provide the youth with a safe environment. In cases where family dysfunction increases suicide risk the youth may have to be re-located to a safer environment (Stokes, 1994).

Crisis Intervention

The goals of crisis intervention are threefold: to keep suicidal youth alive, to convince them of other solutions to their problems, and to engage their families in treatment. Generally, when the crisis is resolved suicidal inclinations diminish or disappear (Kienhorst, 1995; Rittner et al., 1995).

Keeping suicidal youth alive. To keep suicidal youth alive until the crisis situation has been resolved, we must help them achieve a lower level of lethality (the probability of the person killing him- or herself). One way to decrease lethality is to decrease the subjective distress; even a slight improvement in the youth's unbearable problems allows him or her to consider alternatives to suicide (Leenaars & Lester, 1995a).

Many therapists ask suicidal clients for a written promise that they will abstain from suicidal behavior. These contracts must be articulated in explicit terms, specifying that clients will not intentionally or willfully hurt themselves, will not permit another to intentionally or willfully hurt them, will contact their therapist or a crisis number if they become suicidal, and will not act on any suicidal impulse until they speak with their therapist (Rittner et al., 1995, p. 79). These contracts have two general benefits; first, potentially suicidal youth may adhere to this promise, and second, it helps them realize that they do not have to act on their suicidal impulses. The authors suggested that youth who refuse to sign a contract may be determined to die, and that when this is the case hospitalization is required.

Suicidal youth can be helped to identify stressful situations when the suicidal impulse is strongest and assisted in developing a plan for coping during these high risk times. Rotheram (as cited in McEvoy & McEvoy, 1994) suggests having students construct a "Feeling Thermometer" which indicates feelings as units ranging from 0 to 100. Students are asked to list ten situations with varying degrees of stress. Events which generate the

greatest stress receive the highest numbers on the scale. The top of the scale represents situations that increase the risk of suicide for students (i.e., family fights, loss of family member, personal rejection). Once students are able to identify stressors they are helped to develop coping strategies such as getting help from a trusted adult, talking to a supportive person, engaging in rigorous physical exercise, taking deep controlled breaths and visualizing a peaceful scene, or consciously replacing negative thoughts with positive ones. From these techniques students learn to differentiate their emotional states, and to assess the intensity of their feelings.

Teaching suicidal youth to solve problems. Suicide is often considered a reasonable solution to an unbearable situation. When the therapist can persuade the youth of other solutions a part of the crisis is resolved (Kienhorst, 1995). Catenaccio (1995) suggests that destructive behaviors be identified and labeled, confronted with their derivation, result, meanings, and function, and then systematically replaced with preferable alternatives. Rittner and his colleagues (1995) pointed out that rehearsing alternatives to self-destructive thoughts can interrupt circular patterns associated with adolescent depression. Suicidal youth lack problem solving skills, therefore therapist must teach them.

McEvoy and McEvoy (1994, p. 95) offer the following steps for teaching students in crisis to solve problems:

1. Clarify the Problem (definition of a problem which allows for concrete resolution).
2. Establish Appropriate Goal (the new goal must be specific and translated into concrete behaviors).
3. Brainstorm Alternatives for Reaching Goal (create a sense that real options exist).
4. Evaluate and Select Alternatives (possible negative and positive consequences of each).

5. Specify Steps to Implement Plan (considering in practical terms the concrete, sequential steps necessary to make the plan work; anticipate possible setbacks and have a back-up plan in place).

6. Evaluate Effectiveness of Plan.

Psychotherapy with suicidal youth. In the course of psychotherapy the suicidal youth's risk factors and precipitating stress are examined and treated. When possible, stressful aspects of the youth's environment may also be altered. Successful treatment strategies involve interventions that decrease the impact of risk factors and enhance the role of protective factors (Gorsz et al., 1995; McEvoy & McEvoy, 1994).

Since the suicidal crisis is characterized by chaotic feelings and confusion, therapists should provide structure (i.e., make an appointment every day with the suicidal person) and direction (i.e., be specific and concrete about problems and problem solving) to lessen the confusion the youth is experiencing. Mobilizing supportive people around the suicidal youth helps to break the climate of isolation and loneliness. Catenaccio (1995) suggests that all potential allies should be pressed into service (i.e., school guidance counselors, homeroom teachers, their friends, boyfriends, and girlfriends). The therapist should use a direct style of questioning because a nondirect style increases the disorientation of the suicidal adolescent.

Many researchers have suggested that the key to therapeutic change lies in the quality of the therapeutic relationship (Berman, 1994; Catenaccio, 1995; Kienhorst, 1995; Kirk, 1993). Kirk believes that the critical components of a positive therapeutic relationships are: "I hear what you're saying," "I take you seriously," and "I'm concerned about you." By being empathic the therapist can help the youth feel understood, build confidence, and improve communication. The therapist's attitude can encourage suicidal youth to choose life instead of death, therefore, all facts surrounding the suicidal behaviors should be applied within an atmosphere of empathy and concern.

Although the therapist should try to understand what caused the youth to entertain suicide, a debate about the value of life should be avoided. Convincing the youth that "life is wonderful" may cause the client to feel misunderstood and jeopardize the relationship. Dulit (1995) suggests the therapist communicate the following idea: "'As important as was the issue that was troubling you--and it was important--not killing yourself and staying alive is infinitely more important'" (p.100). While saying this the therapist gestures with right and left hand to indicate a scale with a set of balances. This stance communicates to the adolescent that the therapist considers both issues important. By maintaining open and noncondemning communication the therapist encourages the suicidal youth to discuss painful thoughts.

Throughout the course of therapy suicidal youth must be monitored. Youth who are at greater risk for suicide, as evidenced by their escalating suicidal behavior, psychosis, or severe depression, may have to be hospitalized. Medication may necessary to sufficiently alleviate symptoms to allow treatment to proceed (Catenaccio, 1995).

Family therapy. Some researchers are of the opinion that treatment during suicidal crises should involve family members or caretakers (Catenaccio, 1995; Henry et al., 1993; Rittner et al., 1995). Rittner and his colleagues found that treatment dropout rates are high, with up to 50% of attempters failing to receive any follow-up care and up to 77% failing to complete treatment. They believe involving family members in treatment alerts them to potential dangers and helps to keep suicidal youth in therapy. Henry and colleagues suggest that rather than viewing suicidal acts as the result of specific individual problems (e.g., hopelessness or depression), we should view them as one symptom of extreme family dysfunction.

Catenaccio (1995) suggests that therapists should help families to recognize their dysfunctional patterns. He also recommends teaching families some rules and skills of effective communication (i.e., no insults, stay on one topic at a time, focus on specifics, flexible brainstorming to solve problems cooperatively, when and how to stop a discussion

that is heading for trouble) and encouraging family members to practice them in therapy sessions.

Postvention

When youth commit suicide their family and friends are left to struggle with their grief. This tragic fact is compounded when the suicide of a student precipitates contagion among other students. To cast some light on this matter this section will look at postvention guidelines schools implement to reduce pathological reactions in students.

Postvention in the School

As a result of a peer's suicide the competencies of other students may be impaired, normal educational routines may be suspended, the safety and mental well-being of some students may be threatened, and some students will be at increased risk for suicide. Therefore researchers suggest that schools establish comprehensive policies and guidelines *before* a tragedy takes place to guide them in the aftermath of a suicide (Card, 1995; Grossman et al., 1995). Grossman and associates pointed out that well-prepared schools are able to respond to their students in a systematic and therapeutic manner. McEvoy and McEvoy (1994) indicated that a postvention policy is one of the best methods of preventing further student risk. They recommend that each school decide in advance who will be in charge if a suicide takes place, designate where meetings will be held following a crisis, and provide school staff with training on how to respond in the aftermath of a suicide. Crisis response teams, including educators and community professionals, should be formed at the district level.

McEvoy and McEvoy (1994, p. 132-137) also recommend the following postvention strategies to resolve individual and collective grief, reduce the risk of additional suicides, and rebuild a sense of community:

1. Upon hearing of a student's suicide, the principal should verify this information with the police or other appropriate officials. Once the information is verified, a prearranged telephone chain should be activated to notify essential personnel (i.e., crisis team members,

the superintendent, teachers, and support staff such as counselors, school psychologists, and school nurses, and building personnel). School staff should be informed that an emergency meeting will be held the next day before the arrival of students.

2. The principal should assemble the crisis response team and invite to this meeting community professionals capable of helping the school cope with the tragedy (e.g., mental health clinicians, clergy).

3. During the emergency staff meeting facts surrounding the suicide should be reviewed and rumors dispelled. Procedures for teachers and staff to follow during the first hour and throughout the day should be discussed, as well as guidelines for announcing the death to students. Mental health professionals should be available for teachers and staff who may require extra support in coping with the suicide.

4. Close friends of the deceased, including a boyfriend or girlfriend, should be taken aside when they arrive at school and informed privately before other students are notified. This group should be invited to discuss what happened and to receive help from a crisis team member. No student should be allowed to leave school unless they are released to a parent or guardian who is aware of what has happened.

5. At the beginning of the first class, teachers should announce what has happened from a prepared statement. This statement should be straightforward with an emphasis on the expression of condolences. Information presented should be truthful but without elaboration of graphic details. Students should also be informed that adults are available in designated counseling areas. Information regarding a memorial service should be given when available.

Following the announcement teachers should encourage open discussion and the expression of grief in their classroom. Student reactions should be monitored. Any attempt to romanticize suicide or to define it as a heroic act should be strongly discouraged.

6. As the day progresses expressions of grief and discussion time may be necessary in each class. Major tests or reviews should be postponed for a few days. In those classes where

the deceased would have been present, a crisis team member or other adult should occupy the seat and share in discussions. It is important for students to feel that help is available to them--both individually and in groups--throughout the day, and to experience a climate where honest and open dialogue is possible. Traumatic events bring up a great deal of unfinished business and open communication helps to resolve it.

7. A school representative from the building or the district, accompanied by a crisis team member, should make contact with the family of the deceased to express condolences and to offer support.

8. At the end of the first day a staff meeting should be held to review events. Crisis team members should offer feedback and provide support. This debriefing is important for the following reasons: 1. It allows staff members to verbalize their feelings and to build solidarity. 2. It reinforces the sharing of ideas for working effectively with students. 3. It allows staff to plan the next day's activities. 4. It may help identify students who are suffering from problems which have surfaced due to the crisis. Such meetings should continue periodically for several weeks after the death.

9. Information should be shared with concerned parents in small groups rather than in a large open meeting because large assemblies tend to heighten charged emotions. Parents should be afforded the opportunity to share feelings, to gain an understanding of the school's response, and to discuss coping strategies which could benefit them and their children.

10. School protocol and classroom interactions should resume a sense of normalcy within a few days of the tragedy. Following the death the crisis team should continue to meet daily for as long as necessary to process student referrals and to assess the continuing impact of the suicide on the school community.

11. If the funeral is scheduled during school hours the school should remain open. Commemorative or other observances at school for the deceased should be given a low profile. Well-intentioned responses such as flying the flag at half mast, displaying a

memorial plaque, dedicating the yearbook, or planting a "suicide memorial" tree should not be considered. Dramatic gestures of loss can make a suicide look attractive, mystify it, and give it heroic dimensions.

Summary and Discussion of Prevention, Intervention, and Postvention

The prevalence of youth suicide in Alberta warrants the involvement of schools in suicide prevention. However, we must heed the cautions of those who are concerned that suicide prevention programs may have negative effects on students. To ensure successful, cost efficient programs in the schools administrators should pinpoint the needs of their student body, implement broad and narrow foci programs based on sound research that address these specific needs, propose appropriate objectives and cost effective strategies for achieving these objectives, and conduct formative and summative evaluations that assess their impact. By implementing both the narrow and broad foci in their suicide prevention programs schools can identify suicidal youth and reduce future suicidal behaviors.

Knowledgeable intervention is the key to remediating the problems associated with youth suicide. Youth in a suicidal crisis need understanding, empathy, and support. They also require competent professional care and a safe environment. A careful and comprehensive assessment can determine the youth's risk of suicide and indicate appropriate interventions. Psychotherapy, individually and with the youth's family, can help resolve the youth's precipitating stress, as well as his/her underlying risk factors. *Treatment Approaches With Suicidal Adolescents*, edited by Zimmerman and Asnis (1995) is an excellent resource for mental health professionals working with suicidal youth.

By developing and rehearsing plans and procedures before a tragedy occurs schools can be prepared to minister to students and help reduce the risk of suicide contagion. *Preventing Youth Suicide: A Handbook for Educators and Human Service* Professionals, written by McEvoy and McEvoy (1994) is an excellent resource to assist school personnel in suicide prevention, intervention and postvention.

CHAPTER V

Conclusion

A Brief Summary of the Major Themes Presented in this Thesis

This study investigated youth suicide by focusing on four separate but interrelated phenomena: first, parasuicide and suicidal ideation; second, methods of suicide; third, biological, psychological, and social/environmental risk factors associated with youth suicide; and, fourth, suicide prevention, intervention, and postvention.

Statistical Data

Our analysis of international statistics found that although youth suicide is a worldwide concern no universal pattern of death prevails, which is to say that various nations are currently experiencing different rates in male and female youth suicides. In some nations youth suicide rates have increased dramatically, while in others they have stabilized or even decreased. Moreover, some countries have experienced increased youth suicide rates among males but not females, or vice-versa. This disparity among nations in their rates of youth suicide remains something of a mystery.

Canadian youth suicide rates have risen steadily over the past four decades and are among the highest in the industrialized world. Whereas Canada ranks third in reported teen suicides in the industrialized world (13.5), the United States ranks fifth (11.1) (The United Nations Children's Fund, 1994). Similarly, Canada's rate for youth aged 15-24, is also higher than that of the United States. Young Canadian males are estimated to be at a 60% greater risk for suicide than their counterparts in the United States (Leenaars & Lester, 1995b; Lester, 1991). In Canada suicide is the third leading cause of death for adolescents, after accidents and homicides (Health and Welfare Canada, 1994). It accounts for at least 14% of all deaths among youth 15-19 years of age (Rittner et al., 1995).

Statistics Canada (1997) reported that 646 Canadians between the ages of 10 and 24 committed suicide in 1995. This total included 22 males and 21 females, aged 10-14; 217 males and 47 females, aged 15-19; and 290 males and 49 females, aged 20-24. Two

groups at a greater risk for suicide than the general population are Aboriginal people and gay men. The incidence of suicide in the Native population is estimated to be at least 2.5 times greater than that of the general population. Some researchers claim that gays may account for 30% of male youth suicides each year.

Alberta recorded the third highest total number of suicides in Canada in 1995, ranking behind Quebec and Ontario. In 1996 out of a total of 458 Albertans who killed themselves, 82 were between the ages of 10 and 24 (Office of the Chief Medical Examiner, 1997). Consistent with international and Canadian statistics, Alberta's suicide rates for youths aged 15 to 24 have increased more dramatically then those for the older age groups. Youth suicide in Alberta is primarily a male phenomenon. Since 1994 female rates have actually declined, while the male rates have increased for the 10-14 age group, stabilized for the 15-19 age group and decreased for the 20-24 age group. Most of Alberta's youth suicides took place in the northern rural area. It is possible that Alberta's current commitment to report suicides and the implementation of a more accurate system of data collection is partly responsible for its high ranking compared to the rest of Canada.

Suicidal attempts and suicidal behavior are even more common among youth than completed suicide. Although there are no official statistics on attempted suicide, it has been estimated that there are at least 10 and perhaps as many as 100 attempts for each death (Lester, 1991). While youth suicide is mainly a male phenomenon, parasuicide is a predominantly female phenomenon. We can better understand this if we grasp the following: about eight times more females *attempt* suicide, while four times more males *complete* it. Thus far, research has been unable to explain gender differences in this matter although it is widely accepted that the majority of suicide *attempters* lack clear lethal intent. The data is clear that suicide attempt is one of the strongest predictors for death by suicide; a previous suicide attempt by an adolescent increases his/her risk of eventual suicide by approximately tenfold (Levy et al., 1995).

Suicidal ideation has also been found to be widely prevalent among young people with the incidence increasing steadily from very young children (12%) to older adolescents (63%). Moreover, young girls contemplate suicide and fantasize about it to a greater extent than young boys.

Methods of Suicide

No differences were found with respect to gender in the suicide methods employed by young Canadians in 1995. Canadian youth employed the following methods of suicide: hanging (46.5%), firearms (24.6%), and carbon monoxide poisoning (11.7%) (Statistics Canada, 1997). Alberta's statistics do not provide a breakdown of methods used according to age groups, however, the available data indicate that males more frequently chose firearms, hanging, and carbon monoxide poisoning, while females more frequently chose drug overdoses, carbon monoxide poisoning, and hanging. The data regarding parasuicides indicate that suicide attempters generally use less lethal methods than suicide completers, thus rescue is more likely. This also suggests that suicide attempters may differ from suicide completers in their intent.

Risk Factors

Several risk factors increase the likelihood of suicidal behavior in youth, however, seldom is suicide caused by one specific factor or triggered by a single event. Youth suicide most typically results when a number of biological, psychological, and social factors interact to produce a negative impact on the individual. Although most youth suicides are *preceded* by a crisis, it is generally accepted that this does not cause the suicide attempt but rather serves to convince the particular youth that there is no reason to live and that suicide is his/her best course of action.

Although various combinations are associated with youth suicide, no universal set of risk factors exist, therefore, each suicide must be considered within the context of the particular youth and his or her specific environment. (My own personal observations have led me to conclude that depression, hopelessness, and family dysfunction are the most

significant risk factors in youth suicide.) Research indicates that about 70% of suicide completers had been previously diagnosed with depression (Health and Welfare Canada, 1994). Pfeffer (1986) reported that a pervasive sense of hopelessness is even more predictive of suicide than a diagnosis of depression. McEvoy and McEvoy (1994) found that hopelessness in the face of a perceived intolerable life crisis is often the catalyst for self-destruction. The majority of suicidal youth come from dysfunctional homes and suffer psychological impairments, therefore, suicide intervention must take into account family factors that engender suicidal behavior.

Suicide Prevention, Intervention, and Postvention

Suicide awareness programs in Canada and the United States range from brief presentations for faculty or students to comprehensive systemic programs involving students, faculty, administrators, parents, and community service providers. When I began researching youth suicide I was surprised to find that most prevention programs are not evaluated after being implemented. However, as Borg and Gall (1989) point out, we must evaluate programs to make judgments about their merit. Evaluation can yield important data about the benefits and problems of various alternatives. Schools could use these data to make decisions about the programs and to create advocacy for further programming.

Alberta Education does not view suicide prevention as a priority. As a result, few schools in Alberta have implemented suicide prevention programs. However, the prevalence of youth suicide in Alberta warrants the involvement of schools in reducing this behavior. To ensure successful, cost efficient programs in the schools administrators should pinpoint the needs of their student body, implement programs based on sound research that address these specific needs, propose appropriate objectives and strategies for achieving these objectives, and conduct formative and summate evaluations that assess their impact. The goals of programs with a *narrow* focus are to ensure that persons coming into contact with potentially suicidal youth can more readily identify them, know how to respond to them, and know how to obtain help for them. It should also ensure that troubled

adolescents are aware of and have access to helping resources (Kalafat & Elias, 1995). The goal of the *broad* focus is to reduce suicide risk among students by instilling hope and by teaching them effective coping skills. This involves teaching the knowledge and skills required to build a community of support, to avoid social isolation, to develop healthy self-images, and to resolve personal crises (McEvoy & McEvoy, 1994).

Knowledgeable intervention is the key to reducing youth suicide. Youth in crisis need understanding, empathy, support, competent professional care, and a safe environment. We must guard against taking too simplistic an approach to intervention by assuming that all suicidal youth need the same treatment, or by assuming that all individuals with a given diagnosis warrant the same approach without taking into consideration the subtleties of their particular symptom presentation (Zimmerman, 1995a). Individual psychotherapy along with family therapy should address the youth's precipitating stress as well as his/her underlying risk factors. Given the crisis-oriented nature of intervention, a directive approach is usually necessary.

With respect to postvention, schools must develop and rehearse plans and procedures before a tragedy occurs to ensure that staff are prepared to help students cope with the shock and grief of the death, and to help reduce the possibility of suicide contagion.

Further Ideas and Conjectures about this Problem

In the last forty years an enormous interest in suicidal behavior has fueled empirical research from which we have learned a great deal about the phenomenon. However, despite the upsurge in research, there has been no overall lessening of youth suicide. Research informs us that most youths contemplate suicide because of what they perceive as unbearable pain. But what causes unbearable pain in youth? It is my opinion that changes in our society that impact directly the lives of youth are partly responsible.

Social changes effecting the family are a major source of anomie among our youth. Divorce rates in Canada and the United States have increased dramatically since 1960.

Haffen and associates (1996) found that more than a million youth in the United States are involved in a parental divorce *each year*. Parental divorce entails major readjustments for youth which are stressful and increase their insecurity, instability, and isolation. Often youth are deprived of the father or mother, or deprived of them in alternating fashion at a critical time in their emotional development. These youth lose their interest, attention, and their affection as parents struggle to cope with their own stressful changes. Young children face the added stress of being looked after by a stranger, or a series of strangers. There is also the possibility of having to adjust to the remarriage of one or both parents, and stepsiblings brought into the family (Lefrancois, 1989). Divorce usually necessitates a residential relocation which may force the youth to change schools, and to abandon long-term friendships. All these changes are incredibly stressful and may evoke intense reactions that may lead to suicidal ideation.

Families are becoming increasingly violent. McEvoy and McEvoy (1994) found that nearly three million cases of child maltreatment are reported in the United States *each year*. Grosz and his colleagues (1995) reported that 34 percent of suicidal youth have experienced physical abuse and 44 percent have suffered sexual abuse. The consequences of this abuse extend far beyond immediate injury; the devastating effects of this trauma often translate into long-term impairments that put them at an increased risk for suicide. We must intervene as best we can to reduce family violence and institute programs that prevent child maltreatment.

To curb family violence we must create safe environments where families in conflict can access help. Discussing their problems openly (and anonymously) may help parents get through times of crisis without becoming violent with their children. Berger and Thompson (1995) have suggested that communities provide a network of nurses and social workers to visit families with young children to encourage good health practices and to screen for potential problems and to provide referrals when necessary. As well, a variety of programs such as parent-newborn bonding sessions, high school classes in parent education, crisis

hotlines, respite care, drop-in centers, special training for teachers and police officers on recognizing abuse and neglect, and programs that educate children about physical and sexual abuse need to be implemented.

Another important change which is negatively affecting our society is desensitization to the topic of suicide. (I realize that this is a conclusion chapter and that it is rather late to introduce new ideas, but I believe that data regarding desensitization is relevant to youth suicide.) Books and manuals describing philosophical and psychological justifications for suicide, and outlining the most effective methods to use are readily available to the public and, of course, to teens as well. These books sometimes refer to suicide as "self-deliverance" rather than as self-destructive. In recent years graphic instructions on how to commit suicide have become available on DeathNet, an on-line Internet service based in Victoria, B.C. accessible to anyone with a computer and modem. DeathNet offers for sale Dr. Jack Kevorkian's book *The Goodness of Planned Death* , as well as a step-by-step manual on suicide using plastic bags, barbiturates, gassing and other lethal methods. Its advertisement proclaims: "'[This manual is] the newest, most authoritative guide to suicide in the world! Incorporating the latest information about drugs, dosages and techniques conducive to successful suicide--only $12.95'" (Chase, 1995, p. 4). Also available on the Internet is "alt.suicide.holiday 1.," where one may post a suicide note which thousands can read. Suicide pacts can be arranged world-wide. One posting read: "'four poets in Israel want to commit suicide'" (Masecar, 1995, p. 1). Postings include the expression of suicidal thoughts as well as specific information on how to kill yourself. Many believe that soon it will be possible to download an actual suicide that includes pictures, video, and sound.

All of this points to a disturbing trend in society. Not only have the taboos regarding suicide been lifted, but suicide is now actively encouraged and glorified as an act of "self- deliverance." Vulnerable youth yield to these powerful suggestions. Under the

guise of freedom of speech we have withheld our protection from those in our society who most desperately need it.

Final Statement

While research on the phenomenon of youth suicide has been impeded by methodological problems, it has nevertheless provided us with an impressive body of data to guide our understanding of this complex topic. Youth suicide has risen dramatically in Canada and Alberta over the past several decades. The data indicate that youth suicide is the result of a complex interaction of underlying biological, psychological, and social/environmental risk factors. It now behooves us to address these risk factors by implementing effective suicide prevention, intervention, and postvention programs. With knowledge we can curtail rising suicide rates. Our best hope is through education which equips all students with the knowledge, skills, and values necessary to become competent, healthy adults. Society, particularly the school system and the family, must take a more responsible role in protecting our youth.

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Appendix

Table A1

Canada, Age-Specific Suicide Rates, Both Sexes, 1950-1993
(Rates Per 100,000 Population)

		Ages			
Year	Total	5-9	10-14	15-19	20-24
1950	7.78	0.00	0.27	3.34	5.86
1951	7.40	.00	.09	1.80	5.97
1952	7.30	.00	.34	2.04	5.37
1953	7.10	.00	.40	2.56	5.06
1954	7.22	.00	.31	2.06	4.93
1955	7.05	.00	.15	1.84	4.10
1956	7.62	.00	.42	1.81	4.96
1957	7.50	.00	.13	2.05	5.72
1958	7.44	.00	.68	2.52	5.99
1959	7.10	.00	.29	1.90	5.29
1960	7.55	.00	.34	3.27	7.30
1961	7.49	.00	.43	2.30	5.74
1962	7.16	.00	.63	3.24	6.82
1963	7.59	.00	.66	3.88	8.07
1964	8.22	.00	.65	3.56	7.65
1965	8.73	.00	.78	3.74	8.31
1966	8.57	.00	.91	3.70	9.10
1967	9.03	.00	.56	5.04	10.07
1968	9.76	.00	.77	4.64	10.86
1969	10.91	.00	.67	6.16	13.88
1970	11.33	.00	.74	7.02	14.05

1971	11.62	.04	.73	7.74	13.66
1972	11.92	.00	.98	9.06	16.47
1973	12.29	.05	.97	8.86	15.78
1974	12.69	.00	.72	10.55	18.25
1975	12.10	.15	.93	9.94	18.09
1976	12.48	.00	.96	10.44	17.48
1977	13.94	.11	1.39	12.34	21.41
1978	14.46	.11	1.36	11.75	21.15
1979	13.83	.05	1.08	12.63	20.82
1980	13.65	.00	1.06	11.45	17.96
1981	13.67	.06	1.76	12.31	18.36
1982	13.98	.06	1.41	12.24	18.00
1983	14.75	.00	1.21	13.12	18.71
1984	13.38	.06	1.45	12.02	17.78
1985	12.56	.05	.92	10.90	16.80
1986	14.01	.05	1.32	12.08	17.70
1987	13.54	.00	1.65	12.41	16.25
1988	13.05	.05	1.47	12.41	17.68
1989	12.75	.00	1.34	12.75	16.85
1990	12.16	.05	1.53	11.62	16.45
1991	12.78	.05	1.46	13.14	17.16
1992	12.99	.00	1.76	12.89	17.81
1993	13.14	.05	2.24	12.19	16.47

Note. From Statistics Canada (1994). Suicides Canada 1950 - 1993.

Table A2

Suicidal Deaths by Sex and Age, Canada 1995

		Age (years)																			
	Total	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-59	70-74	75-79	80-84	85-89	90+	N.S.
M	3,158	-	-	-	22	217	290	325	419	398	344	289	233	154	130	100	89	69	41	27	9	2
F	812	-	-	-	21	47	49	65	76	97	108	89	69	49	45	34	29	17	11	4	2	1

Note. From Statistics Canada (1997). Catalogue 84-208-XPB, pp. 262-263.

Table A3

Alberta, Age-Specific Suicide Rates, Both Sexes, 1950-1993
(Rates Per 100,000 Population)

		Ages			
Year	Total	5-9	10-14	15-19	20-24
1950	8.98	0.00	0.00	0.00	2.68
1951	9.15	.00	.00	1.35	11.90
1952	9.66	.00	.00	1.34	9.08
1953	7.11	.00	2.56	2.64	5.09
1954	10.03	.00	.00	2.56	4.98
1955	8.80	.00	.00	2.52	4.90
1956	10.24	.00	1.03	1.24	1.21
1957	9.02	.00	.00	2.39	7.10
1958	9.20	.00	1.82	5.73	4.68
1959	9.38	.00	.00	2.20	8.09
1960	9.22	.00	.00	4.22	15.95
1961	8.93	.00	1.53	4.04	8.97
1962	8.47	.00	1.46	4.75	4.37
1963	7.63	.00	.70	3.59	5.32
1964	10.98	.00	.67	5.12	10.47
1965	11.04	.00	1.30	4.86	9.17
1966	9.98	.00	1.90	4.65	17.65
1967	9.19	.00	1.23	6.62	11.96
1968	10.17	.00	1.78	7.69	17.91
1969	12.57	.00	2.87	12.69	19.84
1970	13.35	.00	1.68	14.78	23.05
1971	10.89	.00	1.08	13.83	15.16

1972	12.59	.00	.00	16.65	20.22
1973	12.48	.00	1.04	16.00	18.93
1974	15.85	.00	1.04	18.25	25.71
1975	14.61	.00	1.56	16.67	21.56
1976	16.49	.00	2.12	19.34	28.70
1977	17.61	.00	3.24	24.39	28.35
1978	16.27	.59	3.88	15.62	20.37
1979	14.91	.00	1.13	18.47	22.82
1980	17.67	.00	2.79	19.75	22.22
1981	14.93	.00	2.75	18.03	18.08
1982	15.10	.00	2.75	14.70	18.88
1983	16.38	.00	1.66	19.37	17.07
1984	16.88	.00	3.36	15.42	21.29
1985	12.28	.00	1.13	14.35	18.53
1986	17.39	.00	4.56	20.23	24.39
1987	15.72	.00	1.72	17.91	17.78
1988	16.24	.00	2.85	18.09	22.17
1989	14.45	.00	1.67	17.10	18.30
1990	15.76	.00	4.88	18.18	27.35
1991	17.76	.00	2.11	25.32	26.96
1992	17.86	.00	4.11	20.17	25.06
1993	15.44	.47	.50	12.93	19.83

Note. From Statistics Canada (1994). Suicides Canada 1950 - 1993.

Table A4

Alberta Youth Suicide Statistics 1984-1996

(Rates per 100,000)

Ages	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
5-9	-	0.6	-	-	-	-	-	-	-	-	-	-	-
10-14	3.4	1.8	4.8	1.7	2.9	1.7	5.6	2.2	4.3	0.5	3.5	2.9	3.8
15-19	16.0	17.1	24.2	19.1	19.1	18.2	18.8	26.0	20.3	12.2	17.6	16.7	14.4
20-24	24.2	22.6	22.3	18.1	23.4	20.3	28.0	30.5	26.9	21.7	17.7	27.1	22.7

Note. Adapted from data received from the Office of the Chief Medical Examiner, 1997, and used with permission.